THE

AMERICAN FARMER,

AND

SPIRIT OF THE AGRICULTURAL JOURNALS OF THE DAY.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . *Virg.*

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WORK FOR APRIL.

In opening the labors of this month to your consideration, we shall be brief, there being no time to waste in speculations. We shall, therefore, content ourself with simply conjuring you by every consideration which should have weight with men, to address yourselves to your respective labors with indomitable resolution, with unceasing energy, with willing hearts and strong arms—to determine, come what may, to do, and have, your work well done—to do it at the right time, and to always keep ahead of it—to complete whatever you may begin before undertaking anything else, except when compelled by necessities which cannot be resisted—to keep your fences in order at all times, and your tools and implements in such conditions as to be always fit for use, and never delay working your crops when they may need it. If you carry out these determinations you cannot fail to make a crop, and to enjoy the pleasing gratification to know that you had fulfilled your duty. With these admonitions we shall proceed in our detail of what may be advantageously done

On the Farm.

Planting and Culture of Corn.—Time of Planting.—It would be folly to attempt to fix upon any given day as the one for planting corn, for such is the difference in the climates of our several States, that the corn may be up and have had two or three workings in one, before the frost is out of the ground in another, State. We may, however, lay it down as a criterion, that when the oak leaf is about one-fourth its natural size is a good time to plant corn.

Preparation of the ground.—Where the ground may have been ploughed through the winter, it should be harrowed so soon as the frost is out of it,—and here we will remark, that the harrowing should be thorough, as the finer and more complete the tilth the better will the corn grow and ripen its grain, and that the ground should also be rolled.

If the ground is still to be ploughed, do it without delay, so soon as it is in a condition to undergo the operation—and be sure to plough deep.

Unless the ground be *very fertile*, it should be highly manured, for corn is, as we have often said, a gross feeder, and will not produce well unless it be liberally fed—whereas, if you give it plenty to eat, it is one of the most prolific and profitable of all the members of the grain family. No corn grower should think of applying less than 20 double horse cart loads of stable or barn-yard manure, or a like quantity of rich compost, per acre:—and were he to apply twice that number of loads, he would find his interest in it,—as upon half the quantity of land, and with half the force, he would make as much, if not more, corn. To grow corn upon poor land without plenty of manure, is as disappointing as it is profitless—as ruinous to man, as it is killing to beast.

Quantity of Seed per Acre.—A peck of seed is the quantity usually estimated as being sufficient to plant an acre—five or six kernels should be dropt in each hill.

Preparation of the Seed.—Put a pint of tar into a tub, over this pour two or three gallons of boiling water, stir until the tar is dissolved and incorporated with the water, then put in a bushel of corn, and continue to stir until all the grains are coated. To make the grains separate easily, they should then have equal quantities of plaster and ashes strewn over them, and the mass stirred until the grains of corn are covered with the mixture of plaster and ashes—they may then be planted. No more prepared corn must be taken out at a time than can be planted through each day. It may remain several days after preparation, if excluded from the air, without injury, but does not bear exposure so well.

There is another method of preparing seed corn, which is said not only to protect it from birds and insects, but to promote its early growth. It is this. dissolve 2 lbs. of copperas in as much warm water as will cover a bushel of corn; pour the decoction on the corn, and let it soak 24 hours; then drain off the liquid, and stir in half a gallon of soft soap, so as to coat the grains of corn: this done, add as much plaster as will separate the grains and render them fit for planting. We have prepared seed corn with the decoction of copperas and dried with plaster, and was pleased with the result, and have no doubt that the addition of soft soap, as recommended, will prove, on trial, to be an improvement.

Weak solutions of *salipetre*, and *Glauber salts*, are spoken highly of as *soaks* for the preparation of seed corn, the former we have used and thought well of it, the latter is highly commended by others.

Distance of the rows.—This must be regulated by the height of the stalks—some kinds bear closer planting than others—for a general crop, upon a large scale, 4 feet each way, will be found an advantageous distance, as it gives ample room to work the crop, and sufficient stalks to produce a large number of ears. In very strong soils, where plenty of manure is applied, force abundant, and great products desired, the width of rows may be reduced to 3 feet, and the corn drilled at a foot apart; but as drilling requires a great deal of *hand-hoeing*, which is expensive, it cannot be recommended for any but small premium lots, as the cost of labor would eat up the profit of a crop, if carried out upon an extensive scale.

As to the distance of the corn rows, and the distance of the stalks apart, that is a matter, as we have before premised, which should bear a relation to the size of the particular kind grown, the large varieties requiring more room to grow and pasture in than the small. But where the ground may be naturally fertile, and enriched by a plentiful supply of strong manure, and a heavy product is anticipated, the distance of both the rows and plants should be reduced, for as a stalk of corn can only be expected to bear a comparatively small number of ears of merchantable corn, quantity can only be ensured by multiplying the number of stalks upon an acre to yield the requisite quantity of grain. By looking through the numerous accounts descriptive of *large yields*, we think it will be found, that they were the results of close planting; and indeed, it could not be otherwise, as the *stalks* must be present on the ground, or the *grain* cannot be gathered therefrom. Close planting, however, increases the labor and cost of cultivation, and should, therefore, be well considered before being undertaken. So long as the rows and plants are *not* too close, to enable the culturist to pass the cultivator or plough lengthwise and cross-wise through his corn, the evils of extra cost and labor are avoidable, and so long, if his ground be good, and generously manured, he need not apprehend that the product will be lessened by proximity; for so long as there is room to cultivate and keep his crop clean, the earth open to atmospheric action, and to allow a free circulation of sun and air, he may rely upon its vigorous growth and prolific product.

What is most to be looked to in planting a field of corn, is, so to arrange the *distance* as to dispense with the necessity of using the hoe, except immediately around the plants during their cultivation; that object attained, if they be kept clean and there be sufficient nutriment and salts in the earth, unless the elements forbid it, a good crop of corn cannot fail to reward the culturist's toils.

Number of Stalks in a hill—In strong ground, naturally fertile, which may have been generously manured, broadcast, *three stalks* may be left in a hill; in land of moderate fertility, *two* should be left; but in poor thin soil, unless very heavily enriched by manure, not more than *one stalk* should be left, as a greater number than that would find but meagre fare, and, of course, could not be expected to mature any but small ears, or perhaps, nubbins. In connection with this part of the subject we will venture the remark, that it is folly to attempt to grow corn where the soil is not rich, without manuring it liberally. No plant will grow without food, and there is none which requires it more than that of corn.

Modes of Culture—As almost every neighborhood has its own modes of culture, and there are some where there are various methods practiced, it would be presumptuous in any conductor of an agricultural journal to assume any plan as the *best;* and, as we have much respect for the opinions of others, we shall not place ourself in a position so little to be envied as would be ours, were we to say that we could prescribe any method better than that of another,—therefore, all we shall claim for the one we shall lay down will be, that we have seen, and grown, good crops of corn by it. Our plan was this: So soon as the plants were up and of sufficient size to bear working, we turned a furrow on either side of the rows from the plants, which we returned either the same day or the next; hoemen following the ploughs to relieve the plants, and stir the ground immediately around them. If we had not done so at the time of planting, at this working, we gave a dressing to each hill, of a *handful* of compost, made, at the rate, per acre, of 10 bushels of rich mould or rotten dung, 5 of ashes and 1 of plaster.—After this first working, *except in stiff ground*, we never used the plough, but substituted the *cultivator* in its stead, taking care to go as near the corn plants as possible, having hoemen ready, as in the first working, to cultivate immediately around the plants, relieve them of weeds and grass, and stir up and keep the earth open to atmospheric influences; repeating these workings every few days, as required by the condition of the ground and necessities of the plants, until the corn crop was laid by.

It will be perceived by this process, that we gave no hill to the corn; and we believe, that by avoiding *that*, we consulted nature, and ensured a better capacity for the stalks to resist the levelling influence of heavy winds. By using the *Cultivator instead of the Plough*, we avoided the laceration of the roots, and thereby preserved the plants in a continuous state of growing; for it must be admitted, that every cutting off of the horizontal feeders of the corn-plants, must arrest their powers of feeding until new ones are formed; and, we hold it to be consonant with all the principles of vegetable physiology, that every such arrestation of the mediums of receiving sustenance, operates detrimentally to the healthful action of the plants, as every time a partial stoppage of their supplies of food occurs, so, in the same ratio, do you stop their elaboration and growth; *regularity* in the feeding of a growing plant being just as necessary, as it is to a bullock or hog while either is being fattened.

Mode of applying the manure.—As every culturist should look to the general improvement of his land, all applications of fertilizers should be *broadcast;* and, indeed, if that motive were not present to induce him to adopt this form of application, the successful growth of the corn would impel him to it, as but few weeks elapse after it gets above the ground, before the roots of the plants stretch far beyond, and cease, except to a very limited extent, to draw their nutriment and salts from any manure that may be deposited in the hill. While the tap-root penetrates the earth from four to five feet, *downwards*, the lateral ones, the chief feeders, stretch to nearly the same extent, across the furrows, only a few inches beneath the soil, in search of food. The benefit of applying a small quantity of some active fertilizer, say a gill or two gills, to the hill, is, nevertheless, of great benefit in the early stage of vegetation, because it imparts energy to the plants at the onset, and ensures them a healthful and vigorous growth at the beginning of their career, a thing of paramount importance. It must be obvious then, as the *spongioles*

or *mouths* of plants, are situated at the extreme points of these lateral and fibrous roots, and the plants derive their main nourishment through them, that when they extend beyond the hill to any extent, that they cannot receive but little, if any nutriment from the manure placed therein, and, therefore, that, to afford general and continuous benefit to the plants, during the progress of their elaboration, the manure must be spread throughout the entire body of the soil, and that all *topical* applications must, necessarily, be of but partial service, and continue their benefits for a very limited duration of time.

Working in drought.—Many are opposed to working corn during periods of drought, under the impression that, when thus worked, it causes it to *fire:* now if corn be worked in *dry weather* with the *plough*, which necessarily cuts up and tears its lateral and fibrous roots, the probability, is, that the blades will wither and burn up, not because the earth has been stirred, but because the plants have been unnaturally deprived of their means of supplying themselves with food and moisture from the earth, and, because, by the absence of rain their power of reaction has been suspended, and they cannot re-supply themselves with a new series of feeders. Thus believing, we hesitate not in advancing the opinion, that stirring the earth with the *Cultivator*, is decidedly beneficial, in even the dryest periods, as all such loosenings of the soil serves to prepare it to absorb and condense the dews, and dispense their refreshing influences to the roots of the growing plants. If the dews fall upon a *hard* surface, the sun exhales them before they can possibly do any benefit, whereas, if the surface be open and *in fine tilth*, as a necessary consequence, much will sink into the earth before the evaporating power of the sun's rays can disadvantageously operate, and thus will a moderate degree of moisture be preserved in the earth at a time when it is most needed.

Scare Crows.—Sheets of bright tin, fixed by wires to high poles, and stuck up through the corn-field, forms the very best scare crows we have ever tried; they should be so fixed as that the slightest breeze will cause them to undulate. If so fixed, their reflection alarms the crows and causes them to move off as quick as wing can take them.

What we have said upon this subject, though intended for all, is more directly addressed to the *young* corn-planter. Those who may have had long practical experience, have, of course, become wedded to their own systems, and may not feel disposed to abandon them for ours, or for that of any one else. We have been simply induced to present our views, in the hope, that the inexperienced may find something in them calculated to challenge his confidence, and direct his course, in the culture of this most important crop. Having practiced on the plan we have laid down, and found it good, we feel the less delicacy in presenting it for the consideration of others; and will conclude by saying, that *liberal manuring, deep ploughing, thorough harrowing* and *rolling, plenty of stalks to the acre*, and *cleanly culture*, are the only means by which a large crop of corn can be raised.

Application of Lime.—As there is no better time or occasion to apply lime, we will say, after you have prepared your corn ground, if it needs it, spread your lime thereon. If the soil has been in grass, and is well supplied with vegetable matter, you may put on a *hundred bushels* to the acre—if it be in moderate heart, *fifty bushels* will answer; but if it be poor, thin land, *twenty-five bushels* will be enough.

To poor sandy lands, we would apply lime in *compost*, made thus: For every acre we would mix 25 bushels of lime with 20 double-horse-cart loads of clay—shovel this over two or three times, at intervals of a week, and after ploughing and harrowing the land, we would haul on the compost, spread it evenly, and harrow and cross-harrow it in, so as to incorporate it with the soil.

In speaking upon the subject, Professor *Rodgers*, in his work on "*Scientific Agriculture*," sums up the virtues and offices of lime, in the following sententious

RECAPITULATION:

1. Lime increases the fertility of soils deficient in this element.
2. It causes the soil to produce grain which yields more flour and less bran, and improves the quality of all other crops.
3. It increases the effect of other manures by hastening decomposition.
4. It destroys noxious insects and worms.
5. It destroys noxious weeds and mosses, and gives rise to sweet grasses and herbage.
6. It prevents smut in wheat and other crops.
7. It hastens the maturity of the crop.
8. It neutralizes the acidity of sour soils, and renders them productive.
9. It makes cold wet soils dryer and warmer.
10. It renders tight stiff clays loose and friable.
11. It destroys noxious gases and promotes health.
12. It stiffens loose sandy soils.
13. It brings inert organic matters into a state of fermentation.
14. It causes the evolution of carbonic acid.
15. It serves directly as the food of plants.
16. It causes the fermentation of several salts in the soil.

The *modus operandi* by which Lime effects the improvement of the soil was never explained more briefly, or justly before. Every line in explanation of its action, is made to address itself to the farmer's common sense.

Pastures.—There is, perhaps, no part of the business of American husbandry more neglected than that of pastures. Judging from the indifference manifested by many towards providing them for their stock, one would be led to suppose that they were looked upon as of little value, and yet when we come to foot up the aggregate amount of this description of property, it will be found to form an important item in the great whole which comprises the wealth of the nation. Such being the case, and as the labor and comforts of every husbandman's home, is intimately connected with the condition of his stock, it certainly is his interest, as well as his duty, to see that they are well cared for, and provided with good pastures on his own estate, and that they are not turned out to find a living upon the roads, or by poaching on his neighbor. We, therefore, recommend to all who may have spare fields to devote to the purpose, to prepare them to yield pasturage. A few bushels of bones, salt, lime, and plaster, and a few cart loads of woods'-mould, per acre, if composted together, spread broadcast, and *harrowed* in with grass seeds, would, in the course of a single season, form an excellent and permanent pasture, one which would maintain all the stock which any farmer should keep. Perhaps as good grasses as any others, to sow for such purpose, would be the *Red Clover, Kentucky Blue Grass, Timothy* and *Orchard Grass*—say 8 lbs. of Clover seed, to be sown separately, and 5 lbs. of each of the others, mixed,

and sown together. The ground should be first thoroughly harrowed, by lapping, and passing over it lengthwise and crosswise: when the soil may be thus prepared, the seed should be sown, lightly harrowed in, and the ground rolled. A pasture could be thus created, if protected one season, every two acres of which would not only keep, but fatten a bullock, while the cost would be nothing compared with the satisfaction which one would derive from the fact, that he did not annoy his neighbors, by taxing them with the support of his stock—a thing which no one has a right to do.

Oats.—If you have not already seeded your oats, get them in as soon as possible, as the greatest security of their forming grain well, is to be found in early sowing. Though generally consigned to the poorest grouud on the farm, they can only be expected to yield a good crop, when the soil in which they may grow is fertile, and has food in it calculated to supply their wants. Where the soil may be thin, the chance of a *fair* yield may be improved, by top-dressing with 2 bushels of *Ashes*, 1 of *Plaster*, 1 of *Salt* and 2 of *bone-dust*, per acre, to be made into compost and permitted to remain a few days before being used It may be either harrowed in with the oats, or applied afterwards, as may best comport with the convenience of the party. Less than 2 bushels of seed, per acre, should not be sown, and if the ground is good, 3 bushels would not be too much, as it should be an object with the cultivator, to give to the earth as much seed as will occupy it with the plants of the oats, to the exclusion of weeds and grass. When the seeds shall have been harrowed in, the ground should be well rolled with a heavy roller

In the preparation of the soil, care should be taken to plough and pulverize it thoroughly.

Barley.—This grain should be seeded without delay. It delights and yields best in a *good fertile loam.* In such soil, if it be deeply and truthfully ploughed, and thoroughly pulverized, by harrowing, from 25 to 40 bushels per acre may be expected; but we hold it to be folly to attempt to grow it in poor land. It is among the few crops in our country where the product is not equal to the demand; its market value is, therefore, remunerating, and the grain finds a ready sale. As an *alternate* food, for stock of all kinds, it has no superior; its *straw* is well relished by cattle, and clover takes well with it. It should be cut before being dead ripe, as, if left to that state, it shatters considerably. The time for cutting is when the stem beneath the head becomes somewhat dry. It should not be grown in ground infested with garlic, as that would destroy its value for brewing purposes. From 2 to 3 bushels of seed, per acre, is about the right quantity.

Artichokes.—He that may have an acre lot to spare, could not do better than to plant it with *Jerusalem Artichokes.* The ground should be prepared in the same way as for a crop of corn; the tubers to be planted the same as potatoes, with sets with two or three eyes to each, in rows 3 feet apart, the sets the same distance asunder. The cultivation is the same as for corn. An acre will yield from 500 to 700 bushels of tubers, which are excellent food for all descriptions of animals.

In the West, after the crop is matured, the hogs are turned in to feed upon the roots until it is time to pen them for fattening, and thus is the labor of harvesting and feeding them out saved. Hogs go from such patches *fat*, and only require to be *hardened* with corn to fit them for pork and bacon. As soon as the hogs are taken off, the ground is harrowed, and, as a sufficient quantity of the fragments of roots is left in the soil, no further trouble of seeding is required for many years; the ground, however, requires annual dressing with manure, and the plants to be kept clean from year to year until they are of sufficient size to take care of themselves.

Five or six bushels of tubers cut into sets will plant an acre,—and the sooner they are planted the better. The leaves, if cured like the blades of corn, make an excellent fodder, which is relished by cattle.

Accumulation of Manure.—For this duty it may be said that April is not the month, inasmuch as the whole force of the farm or plantation will be called to the performance of labor of more immediate and present interest. True, this may be the case, but we doubt very much whether on a farm of 200 acres and upwards, a hand and team might not be more profitably engaged in the collection of materials, and in the formation of compost heaps from this till next winter, than in any other way. The woods, the ditches, branches, the heads, and shores of rivers and creeks, the marl-pits, the marshes, the road sides, the lanes and yards, and headlands of almost every homestead, unfold so many resources, and contain so many substances, that may be converted into manure—and manure being the life-blood of every soil—that one cannot but be surprised that so few landholders avail themselves of them. By proper attention in this particular, there is scarcely any owner of a farm that might not collect and manufacture a sufficient quantity of manure every season to give his corn and truck ground a heavy dressing of the very best fertilizers, and thereby increase the productive capacity of his lands from one to three hundred per cent., and consequently, enhance his annual income in the same ratio. We have often been pained to hear agriculturists of intelligence say, that they could not get manure to put in their corn with, whose forest lands, and those other places we have named above, were filled with the very best materials to compost into manure, and which required nothing but the exercise of energy, forecast, and industry, to render them available. We recur to this subject now, in order that it may excite at least some of our readers to think, as we are confident, that reflection is all that is necessary to induce them to act. The expense of a team and hand, thus employed, could not exceed, for six months in the year, $100 or $125 at the farthest, whereas, in that time materials could be collected and made into manure, which would be intrinsically worth from $750 to $1000, at a moderately estimated value.

Potatoes.—Towards the end of this month, or the first ten days of the next, will be a good time to get in your main crop of Potatoes. Repudiating all specifics for, and preventives against the rot, we are inclined to believe, after having read almost everything that has been written and published on the subject, that the greatest security against that scourge, is to be found in *early planting* and cleanly culture. Having made this declaration, we will state our plan for the cultivation of this root—a plan by the way, that we rarely ever failed in making a good yield, where the season did not defy our exertions.

Soil.—A grass-sward is generally the best—the soil, in which the potato most delights, is a deep dry mould, the fresher the better, though with plenty of manure and good culture, it will grow in any soil which is sound and not wet; the largest yield we

ever had, was grown on a stiff, red clay, which had been thoroughly prepared and highly manured.

Preparation of the soil.—Plough deep,—as deep as your team can penetrate the earth,—and lay the furrows flat. If it be a grass ley or sward, run the roller lengthwise the furrow, immediately after ploughing, then harrow, and roll again. That done lay off your furrows north and south, 3 feet wide, and 4 inches deep. The laying off the furrows should be done at the time of planting.

Preparation of the Sets.—Cut the potatoes so as to leave two or three eyes to each set, and, as you cut them, strew plaster or ashes over them, so as to cover the wounds and stop their bleeding; spread them on the cellar or barn floor for a few days before planting.

Planting.—When ready to plant, have your furrows drawn as directed, strew therein about 2 inches in depth of good strong manure; on this place your sets, 10 inches apart, sow ashes over them with a free hand, and cover with the plough.

After Culture.—When you first discover the potatoes coming up, if the ground be stiff, or hard, run your harrow through them, crosswise. This will open and mellow the earth, and ensure their coming up with regularity. When the plants are well up, say three or four inches high, dust them well with a mixture of equal parts of salt, slacked lime, or ashes, salt and plaster, whichever may be most convenient for you. That done, throw a *slight furrow* towards the vines, on either side, so as to give them a small hilling, taking care to present a tolerably flat surface. If, after completing this working, you discover weeds or grass among the plants, these must be removed by hoe or hand, as it is important they should be kept clean of such intruders. In ten days, or two weeks, from the first working, give your potatoes a second one, taking care to increase the size of the hill, as also to preserve the comparative flatness of its shape, and to relieve the vines, by the hand or hoe, of all weeds and grass. When two weeks shall have elapsed, give your potatoes a third working, and you may consider their culture completed, unless the weather should be such as to encourage an extraordinary growth of weeds, in which event they must be taken out by hand or hoe.

Quantity of Seed per Acre.—The number of bushels of seed per acre, depends much upon the kind of potatoes planted; some kinds cutting into sets more advantageously than others. We have planted an acre with 10 bushels, and yet we have sometimes found 12, and even 15 bushels required. But whatever quantity we used, we always took pains to procure the very best and largest potatoes for seed, rejecting all that were anywise diseased or decayed.

Before closing our remarks upon this subject, we will observe, that we believe the manure for Potatoes would be greatly improved, if in every ten double-horse cart loads there were mixed at least *ten* bushels of *ashes* to *one* of *salt*. Analyses shows that potatoes strongly abound with the constituent elements of both these bodies, and hence the legitimate inference is, that they are essential to the healthful growth of the plant and the maturation of its tubers.

Lucerne.—Those who desire to put in an acre or so of Lucerne, should do so this month; when once set, if it be kept clean and top-dressed annually, it will last and yield well for many years; each top-dressing should be harrowed in. In good ground, it will bear three cuttings a year, and never fails to yield a heavy crop of grass. A deep, loamy soil, is best suited to its growth, which should be deeply ploughed, and harrowed until the tilth is perfectly fine; the ground should be then rolled and laid off into drills 9 inches apart, 1 inch deep, when the seed should be drilled in, covered, and the earth compressed with some suitable implement. After the ground is ploughed and harrowed, if not done before, it should be limed, as Lucerne, like all the members of its family delights most in a well limed soil,—it requires also to be plastered each succeeding spring. Any enriching manure or compost will serve to fertilize the ground in the first instance, the subsequent top-dressings would be the better of having a portion of ashes in them, say in the proportion of 1 to 6. The plants must be kept clean of weeds the first season.

Spring Wheat.—This grain, though we do not recommend its culture, should be seeded early this month.

Meadows.—If these be tight bound and unproductive, you may improve them, by harrowing, sowing a gallon of timothy seed and giving them a dressing of 2 bushels of ashes to the acre.

Fences.—Look to, and thoroughly repair, your fences,—have this essential duty performed under your own personal supervision.

Brambles, Briars and Bushes.—Have everything in the shape of these pests about your fields and fences dug up or cut down at once, and repeat their destruction as often as they may show their heads through the season—one or two season's war against them, if well conducted, will exterminate them.

Hauling-out Manure.—If your manure is not all hauled out and in place, go to work at once, and cease not until it is completed.

Hemp and Flax.—It is time that these crops were in, and we need hardly add that they each require strong ground.

Tobacco Plants.—See to these: should they appear of feeble growth, water them with a solution of horse-dung, soot, and sulphur.

Root Culture.—Make up your minds to put up in an acre or two of *Parsnips, Carrots, Mangel Wurtzel, Beets* and *Ruta Baga*, to provide succulent food for your milch-cows next winter. All the above roots should be gotten in early next month except the last, which should be put in on or about the 10th of June, or between that date and the 25th of that month. We call attention to this subject thus early, in order that you may procure the necessary manure, which should be well rotted. Should you not have stable or barn-yard manure to spare, Guano and bone-dust will answer as well.

Poultry and other out-houses.—If these have not already been cleaned out and white-washed, have them thoroughly cleansed, and give them a good coat or two of white-wash without farther delay.

Horses, Mules, Working Oxen and Cattle generally.—See that your stock of every kind are well fed, well cared for, and that your milch cows receive some succulent food—that they receive salt twice a week, and suffer for nothing.

In closing our *memoranda* we tender our sincere hope, that good crops, ready markets, and liberal prices, may reward every husbandman in our land for his enterprise, industry, and toil.

SALTING MANURE.—Mixing salt with stable and other manure has a great tendency to prevent the development of grubs and vermin, which are frequently bred in dung when carried unsalted to the fields.—*Am. Ag.*

ADDRESS

BEFORE THE

CHARLES COUNTY AGRICULTURAL SOCIETY.

BY

Hon. JOHN G. CHAPMAN.

Delivered at the First Annual Meeting, held the 14th and 15th November, 1848.

Mr. President, and Ladies and Gentlemen:

Upon this first meeting of our association to concentrate agricultural feeling and intelligence for agricultural improvement, you would, Mr. President, have better consulted the interest of the Society and advanced its objects, if you had selected a fitter organ to address you in behalf of the effort and enterprise which we have attempted, than one who has no other offering to bring to the undertaking than a hearty zeal in the cause and a well grounded conviction that our efforts will not be unproductive of good.

The zeal and interest which was manifested yesterday—and the display of various articles of domestic growth and fabric, the exhibition of utensils and stock at this our first Agricultural Fair, gave assurance that we are in earnest in our efforts—and the aid and encouragement given to us by the ladies of the county, without whose smiles and approbation no undertaking can or should prosper, are the best guaranties that our efforts will be crowned with success.

Without any claim to knowledge of, or science in a profession which among all nations and in all ages, has been considered honorable in its pursuits and peaceful in its employments, I desire rather to urge its importance upon the consideration of those whom I address, and to encourage and persuade our fellow citizens to lend their efforts to the advancement of our objects, than to enter into any detailed history of the advance of agriculture, or to attempt any learned essay upon the different systems which at different periods have been adopted by agricultural communities. I do not expect to submit any new truths or elucidate any new principles, and the few views which I shall submit, are the reflections of my own mind aided by the suggestions of others, and I doubt not that the same principles have been discussed and illustrated by others in a more clear and satisfactory manner than I can hope to do.

Agriculture takes its date from the commencement of society. It had its origin with our first parents, and is the pursuit which God allotted to man; for when he was driven from Paradise because of his disobedience, he was introduced to agriculture, and he became a tiller of the soil. By the sweat of thy brow shalt thou earn thy bread, was the penalty of man's transgression,—but God's mercy held out the assurance, that the employment should be a guaranty against want.

Through the progressive periods of society agriculture has engaged the attention and employed the labor of the greatest number of persons. Human wants have made this occupation necessary, and instinct as well as reason has prompted man to this pursuit. No other employment is so comprehensive in its influence and so universal in its interest, and no art or science is of so much practical importance or so extensive in its operations. Every community feels the effect of its prosperity, and every citizen of every profession is more or less interested in its success. They are "blessed in its prosperity and languish and suffer in its adversity." It is upon this that all other arts, the welfare of society, and even civilization itself, repose—for without it, man would be little more than "a wandering savage roaming the wilderness in search of a scanty and precarious subsistence."

It is not strange then, that in all ages, so much importance has attached to this pursuit, and that before the light of christianity pointed out the hand of a merciful and munificent Providence, as dispensing all the comforts of and blessings necessary for man's happiness, that the invention of agriculture should have been ascribed to one of the deities of the Heathen Mythology, and man should have worshipped the animals they employed in tilling the soil. Guided by instinct, the ancient Egyptian sought from the rich alluvial deposits of that productive country, the means of subsistence, and no necessity prompted him to much effort at improvement. In the progress of the Roman Republic, agriculture advanced with the other arts, and some of the first men devoted their talents to the cultivation of the soil and the improvement of the system pursued among them. We are informed that "Cato the Censor, who was celebrated as orator, statesman and general, having conquered nations and governed provinces, derived the highest and most durable honors from having written voluminous works on agriculture. Virgil, the chief of the Roman Poets, has also written a treatise, which contains not only beauties of poetry, but which might be profitably learned and practiced upon even at this day of advance in science and art. "*Sic quoque mutatis requiescunt fetibus arva.*"

Much has been written both by the ancients and moderns upon the subject, and many efforts have been made in every country to advance agriculture as a science and profession. "Philanthropists have expended their efforts in its improvement—Philosophers have investigated and speculated upon its theory and practice, and Statesmen and States have contributed substantial aid to its advancement." Many developments have been made in the principles of agriculture, and many improvements in their practical application. All other arts are subsidiary to this. Every science contributes to its illustration and may be applied to its advancement. Much, however is yet to be done. Chemistry is daily contributing the discoveries and improvements made in that science. It is teaching the necessity of a correct analysis of soils, and a knowledge of their constituent parts to direct the agriculturist how to apply his manures and the remedial agents to correct the defects in the soil, or supply that which is deficient for the growth of particular plants. Much that was hidden from human understanding has been laid open; much that was doubtful has been decided; many new truths have been added; new principles established; and chemical analysis can determine truths and practice in agriculture with almost as much certainty and correctness, as can be arrived at in the science of mathematics. Whatever is deficient in the soil may be ascertained, and the cause of its sterility be known, and if a poisonous or noxious ingredient is contained, science can detect its destructive properties and convert it, by the application of some neutralizing solvent, into an agent of fertility and wealth. Book farming is no longer derided, and science and learning are the handmaids to agricultural improvement.

Agriculture is a pursuit more congenial to the kinder impulses of our nature, and calculated to develope and strengthen the finer feelings of the heart. No effort should be withheld to elevate it as a science and extend its means of usefulness as far as human agency can advance it, and I may, properly, upon

this occasion, seek to urge upon the members of the Society and the citizens of the county, the necessity of greater efforts to restore our lands to fertility and to foster a spirit of improvement among us. I shall attempt to point out some of the evils and errors of the system, usually pursued among us, and what in my poor judgment, would in some measure remedy their defects. When I speak of errors prevalent in the system among us, I am not to be understood as meaning to embrace all the farmers and planters of the county in the same category. There are some honorable exceptions among them, and their example should be followed, and doubtless will be as we imbibe the spirit of improvement and learn the necessity of profiting by the experience and learning of others. *Præstat naturæ voce doceri, quam suo ingenio sapere.* I mean, however, that the system generally pursued among us, has been defective, that it is expensive and has led to the exhaustion of our lands and lessened the aggregate wealth and productiveness of the county. Among those who have fallen into the greatest errors, I include myself, and I frankly admit that I find it difficult to abandon them and to summon up sufficient firmness and resolution to pursue a course, which my judgment tells me must lead to more favorable results. I hope, however, to catch the spirit and feeling of improvement when I see it manifested around me in the more prosperous and flourishing condition of my neighbors.

The true secret of successful agriculture is to draw from the soil to its utmost capacity of production, consistent with its uniform and progressive improvement. How to obtain this secret, to acquire this knowledge, is the great disideratum and may well be supposed to be the fabled philosopher's stone long and vainly sought for. It is this knowledge which is the object of all enquiry and experiment connected with the cultivation of the soil; and although the advance of science in the improvement of practical agriculture is slow, devious and uncertain, and those who are engaged in it arrive at results and conclusions and establish in their minds judgments upon their operations, without knowing the reasons of their conclusions or being able to assign the causes which have produced the results that have been attained, yet truths evolved from every effort at its attainment, and the march of science is steadily onward.

The time which it is proper to consume in this address, will permit me only to state some of the objections to the system which we pursue and the difficulties under which we labor, without attempting to discuss them in detail, and time, perseverance and increased light to dispel prejudice and correct errors, can alone afford the remedy and place us where our natural advantages might enable us to stand.

Among the errors of a system long pursued may be ranked the careless and indifferent manner in which our work is done and all operations carried on, without attempting to assign the causes which have led to it. This, no doubt, has been occasioned in a great measure by the species of labor usually employed—and in no small degree from the want of proper attention on the part of the proprietor himself. He who should not only direct and superintend all the operations, but should also participate in every thing done on the farm, trusts his part of the work to those who are in most instances incompetent and in many cases unfaithful. The master's hand should lay hold on every enterprise that is undertaken. If it is difficult and expensive to achieve success under the most favorable circumstances, how impossible must it be when every operation is carried on by those who are ignorant of its principles, and have no interest in its results. No more land should be cultivated than can be done in the most perfect manner. Whatever is done should be well done; and every man will agree with me, that we attempt the cultivation of too much land, and hence the full obtainable product is not realized, and the resources of the soil are not returned to its improvement. Large fields are laid out for cultivation, without the means and necessary labor and power to prepare them properly and bestow the requisite after culture. We all know that sufficient time and attention is not bestowed upon raising and applying manures, and that we do not avail ourselves of the sources of manure within our control. Arising from the extent of our farms and the quantity of land in cultivation, is the neglect of enclosures. The fields are trespassed upon, and an indifference and carelessness is produced, which is inevitably followed by waste and improvidence. It is not surprising that such occurrences tend to break the farmer's spirit and wean him from his occupation. It destroys the zeal which he should feel, to make his labor light and crown his efforts with success, and that pursuit, designed by Providence to be the most engrossing and delightful, is attended with ills which are borne with many murmurs and prevent all improvement.

One of the principal errors in the system, in my judgment, is the manner of plowing. The plough is used to facilitate and save labor, and should be so employed as not to injure the land or lessen its fertility. That land may be cultivated for years, yielding remunerating crops, the agriculture of various countries sufficiently proves. The system in England, Scotland, Flanders and other parts of Europe, and in many of the states of the Union, is one of remunerating profits and progressive improvement. The excellence of the system pursued in those countries, is in the manner of ploughing—pulverizing the land and subjecting it to the action of the atmophere, fitting it to inhale and absorb the different gaseous elements that are every where afloat around us, without being so exposed by uneven surfaces as to be washed off by the rains, or so laid as to retain more moisture than is necessary to encourage and promote the vegetation and growth of plants. Improvement in farming commences with improved ploughing I mean not to fatigue you with a treatise on this subject, but so important do I consider it, that although it may be out of place, I could not refrain from asking your attention to it. The land should be so ploughed as not to retain too much water and not to be subject to washing. All experienced farmers agree that it should be deep, so as to afford greater space for the roots of the growing plant, and yield a greater amount of nourishment for its vigorous increase.

"Am I therefore become your enemy because I tell you the truth?"

All will agree as to the propriety of education for the profession which is to be pursued. We do not educate our sons as agriculturists; but we seem to think that no learning is necessary to teach principles as intricate as any other science, and requiring the aid of all others for their successful application. There should be schools of agriculture, and it should be taught as a science—the science of practical agriculture. It is as extensive in its researches, and as minute in its details, and requires as much learning and scope of intellect, as any in the whole range of

physics or metaphysics. I am utterly opposed to educating all the young men of the country, or all those of talent or promise, to the learned professions, as they are usually termed. We must learn that learning and intelligence need not be confined to the professions of law, or medicine, or divinity, but they may be combined with labor, and that the most honorable of all professions and pursuits is not only capable of being exalted by learning properly directed and applied, but that it cannot be profitable unless directed by skill, the experience derived from reading, and the application of science to its proper development. Our boys must be educated as farmers, thoroughly, scientifically and practically educated. They must not only be taught the principles, but the application of them, and become familiar with every truth of science and the means of applying it to the boundless subjects upon which they are to act. Far be it from me to detract from the claims which mind and intellect and acquirement, combined with virtue, have upon the respect and regard of all men. I hold it to be the only standard of greatness or respectability, and that its claims are increased when united with the labor of agricultural pursuits. While, therefore, we are improving that system, which teaches us to increase the capabilities of the soil and to enlarge its powers, it is of far more importance that we seek to cultivate that moral field, whose capacities have been too much neglected,—the mind of the rising generation,—that we prepare and fit it for the development of its powers, and teach our youth to improve the advantages which we have neglected.

I should hold myself to be derelict in duty, and you would consider that I had not discharged the trusts committed to me, if I failed to pay a passing tribute to the pioneer of agricultuaral societies and agricultural journals in this country. To JOHN S. SKINNER, a native of the adjoining county of Calvert, is this tribute due. He established the first paper devoted to the cause of agriculture in the United States—the American Farmer. In 1819, that valuable paper was commenced in the city of Baltimore, and from that time to the present (near thirty years) has this indefatigable friend of the farmer been engaged in collecting and imparting information to improve the agriculture of the country and to elevate its standard as a profession and a science. The prime of his life and the maturity of his mind have been zealously employed, and he is yet laboring, if not with profit to himself, he is rearing a monument to his own fame by the work in which he is now engaged, of which any man in any age might be proud. The American Farmer, as a work of practical value, was regarded as the first journal of the kind which was ever published. The Farmers' Library, which Mr. Skinner subsequently published in New York, was esteemed a work of learning and science. But the journal in which he is now engaged, entitled "The Plough, the Loom and the Anvil," in the principles of political economy and the science of agriculture which it is illustrating, justly ranks far ahead of either of the others—and I take leave to commend it to the favorable consideration of every agriculturist and patriot in the land.

Let us now direct our attention to the population of this county, and, as far as we can obtain the statistics, inquire into the causes of its decline. We have no means of ascertaining the amount of agricultural productions of any one county—but we may well imagine that the productions of the county have diminished ratably with the population. In 1790, when the first Census was taken under the constitution of the United States, the population was as follows:

Year.	Whites.	Slaves.	Free Col'd	Total.
1790	10,124	10,085	404	20,613*
1800	9,043	9,558	571	19,172
1810	7,378	12,435	412	20,245
1820	6,514	9,419	567	16,500
1830	6,789	10,129	851	17,769
1840	6,022	9,182	819	16,023

* It has diminished as stated in this table extracted from the Census, taken every ten years.

Why has the population so diminished? Is it because the capacity of production is less than it was fifty years ago? Is it because the sun does not shine as brightly, and the dews of Heaven fall in as refreshing showers as then? No. There is no physical cause operating to diminish our population—or to lessen the aggregate wealth of our country. We must look further. Population will go where the advantages are greatest. Rich lands find the demands for agricultural productions, will draw the population from less productive soils and those not convenient to a market. It is true that apparently we have our markets convenient enough to us. We have navigation almost at every man's door. But when we have placed our products on board the vessel which transports them to the place where they are to be sold, we have not got them to a market. Where are they consumed? and through what agencies and exchanges do they pass before they are purchased by the consumer? Not till they reach the home of the consumer have they found a market, and the cost of transportation, with all the exactions of freights, factorage, exchanges, and transhipment are paid by the producer. The farmer and planter of this county is far removed from a market for his products. All our agricultural staples pass through many hands before they reach the distant market where they are consumed. The smaller productions of the garden, the orchard and the dairy perish on our own hands. They form no part of our system. We do not seek to raise them, except for individual domestic consumption, because we have no market for any such productions. But the staples of wheat and corn, above the necessary supply for our own consumption, are sold at the neighboring ports of Alexandria and Baltimore, and thence shipped coast-wise to Massachusetts and Rhode Island, and the other eastern states—or, if there is a foreign demand, which seldom happens, a part may find a market abroad. Thus the expense of transportation alone consumes a considerable portion of the farmer's product. And the commissions to factors, and other charges of port duties, &c., being deducted, but little is left to remunerate the farmer for his labor. While many other countries have their market at their door, we pay heavily for transporting our products; and the cost and labor of transportation are abstracted from the means of improvement. If we have a market at hand, the cost of transportation would be saved and the labor applied to the operations of the farm. The nearer the consumer can be brought to the producer, the more profit does the producer derive from his labor, and the greater are his means of increasing the producing powers of the land.

It may be urged that these inconveniences are not greater than to our ancestors. I think they are. Domestic manufacturing was carried on more extensively by them than by us, and the proportion of consumers to producers was greater. We have abandoned in a great measure our domestic manufactures, because similar articles can be purchased at less cost

than we can make them. But it is a question not free from doubt, whether the diminished cost of those articles, similar to such as were at one time manufactured in the county, has been of any real benefit to us. I mean by our purchasing them from abroad. It would be, if they were manufactured by those who would be consumers of our products, and the fabrics and implements which we require would be given in exchange for agricultural productions necessary for their subsistence. But while the price may have diminished, the ability to purchase has also diminished, far more, and will continue to diminish until the farmer learns that he pays "all the freights, and all the commissions, and all the insurance, and all the waste that takes place in the passage of his food and his wool, &c., to and from the place where his wool and the cotton are converted into cloth, and his food into iron and iron implements. "The Plough, the Loom and the Anvil," should be brought as near to each other as practicable, and the artizan, mechanic and manufacturer should be the consumers of the farmers's productions, who use their wares and purchase their fabrics; or as Mr. Jefferson expressed the same idea, "we must place the manufacturer by the side of the agriculturist."

I have said that the market for the products of the farm, is the home of the consumer; and the common sense of every man will tell him that the expenses of transporting those products to that market is deducted from its sale and paid by the producer. We ship our products to the most convenient port,—they are sold by our factors to the speculator, or factor of an Eastern manufacturer, or European capitalist. It is in transit until it reaches the place where it is bought for consumption, and the price which we receive is just so much as the article will sell for, clear of all exactions to which it is subjected. The factor who sells for us is paid a commission. The speculator who purchases of him must have a commission or advance for his trouble and risk. The New York purchaser or agent, adds on his commission, and the consumer buys the article in competition with similar articles that are grown nearer to him—and all these charges and expenses of factorage, commissions, freights, insurances and exchanges, are deducted from the price paid by the consumer, and the balance minus the profits of speculation, is the price paid to the farmer for his products. The nearer then the market or the consumer is brought to the producer, the better the price he will get for his produce. This is the great secret of the wealth and power of England. All of her agricultural products are consumed at home, and she exports the fabric and commodity which is manufactured upon the farmer's products to every part of the world—thus keeping the consumers of her products in the condition of colonists to her. "She is emphatically the workshop of the world." Contrast the condition of Portugal with that of England. The sun never shone upon a fairer region than Portugal, and there is no country more inviting, and affording greater inducements by nature to the agriculturist, yet she is in a state of worse than vassalage to England, because she has by treaty stipulations bartered her manufactures for a market for her wines, and removed the consumer so far from the producer, that the costs of transportation alone exceed the value of the article, and her name is now "synonomous with poverty and wretchedness."

It is population which produces wealth, and population which improves agriculture. We want more consumers for our products. The products will increase if the consumption would increase. Your land will become rich, if your population will fill up and consume what is made. The more that is required for domestic consumption, the more will the capacity of the production be increased. Your lands will grow rich as your population demands from them the ratio of the demand upon the capacity of the land for supplies for domestic consumption. You want population. You want consumers. You want the artizans, and mechanics, and machinists, and manufacturers as consumers for your products: For your corn—your wheat—oats—hay—potatoes—turnips—cabbage, and every other article which the teeming earth will yield to the labor of man. I may be told that many of those articles are not raised in greater amount than necessary for our own consumption. Be it so—and why not! Because we have no market for them! There is no demand for them. There are no consumers for them. Let there be consumers and we shall raise them. We shall find our capacity to increase, in proportion to the demand for consumption, and as the population increases, so will our production. Every means should be adopted to create a larger demand for our products and to lessen the expenses of sending those products to market. We must create a market for our smaller agricultural products—our beef, veal, mutton, turnips, potatoes, cabbages. These must be exchanged for the implements which the farmer requires in the pursuit of his husbandry. Your hoes and axes, and ploughs, and carts, and harrows should be got in exchange for your productions, which now rot on your hands; or for such commodities as may readily be produced, if there was a demand for them. Your wool must be exchanged for cloth or manufactured at home. Your hides must be given in exchange for shoes. The tanner and the shoemaker, the machinist and the manufacturer, the blacksmith and the weaver, must be brought near to the plough; they must inhabit the same neighborhood, and they will prosper and increase together.

Look at the condition of the Eastern States—Massachusetts, Connecticut and Rhode Island—and we may learn the secret of agricultural improvement and agricultural wealth. Maryland and Massachusetts were settled about the same time, and by the same kind of population. If I might be permitted to say that in all the elements of national character, which adorn a people, none were possessed more largely than by the early colonists of St. Mary's. The Plymouth Pilgrims, I doubt not, possessed these attributes in an equal degree. Without going back into their early history, look at their increase in a few years past.

The area of Maryland in acres is 7,040,000—that of Massachusets is but 4,640,000. The population of Maryland in 1820 was 407,350—that of Massachusetts was 523,287. The population of Maryland in 1840 was 469,232—that of Massachusetts was 737,699. The increase of the population of Maryland in 20 years was 61,882—that of Massachusetts, in the same period, increased 214,412. And in Maryland 40,000 of that increase was in the city of Baltimore—while the population of most of the counties diminished.

We have no time to compare the resources and wealth of those two sister Commonwealths. But look at the bank capital and facilities, which their citizens respectively have, and the influence which those resources and facilities have upon the growth of population, the cause of education, and general

prosperity of their citizens. Maryland had a bank capital of $8,901,000—Massachusetts had $32,112,000. Look also at Rhode Island, with an area of only 768,000 acres, her population in 1820 was 83,050; in 1840 it was 108,830—with a bank capital of $11,023,000, being more than the capital in the State of Maryland, with almost ten times its extent of territory and four times its number of inhabitants. And be it remembered that in every crisis of the monetary concerns of the country, the banks of Massachusetts and Rhode Island have never suspended specie payment. In those States the capital is held by the citizens generally, and is for the benefit of the community at large; and I regret to say that in our own State its circulation and facilities are used and employed too much to aid men of wealth, and is not extended in aid of the productive industry of our country.

Again: In Maryland, the number of her population engaged in agriculture at the last census (1840) was 72,946. In other pursuits the number was 29,041—about one-third consumers to two-thirds producers of agricultural productions. In Massachusetts, the number engaged in agriculture was 87,839, and in other pursuits, 125,067—more consumers than producers—affording a market for the farmer, and consuming not only the products of the farmer of Massachusetts, but those of the Maryland farmer also. In Rhode Island, the number engaged in agriculture was 16,619, and in other pursuits 25,156. In those States they consume at home all they can draw from the land, and return it again to sustain its fertility; and then draw a large amount from other States to be consumed by them, and by the aid of the grosser particles, to increase the productiveness of their lands, that were inferior to ours. But time will not permit me to enlarge, or more fully discuss this interesting and important branch of the subject.

Connecticut also affords a striking example of the importance of a home market for the products of the farmer. With a bleak climate and sterile soil, she supports a dense population, and her agriculture is as profitable as that of any other State. The market for her farmers is at their door. They are at no cost for transportation. All her productions are consumed on the soil. There is no manure lost. It is returned to the land to enrich it, and nothing is reproduced, and production and reproduction goes on increasing, accumulating products of successive years, because it is consumed at home and returned to the land. Every necessary article is obtained by the farmer in exchange for some commodity; his expenses are inconsiderable; and the manure arising from the coarser parts of his products, is returned to the land in fertilizing streams to increase its capacity to supply the growing demands made upon it. The farmer saves the cost of transportation, commissions to factors, insurance, port duties, exactions for exchange, and the whole product of labor and industry is returned to the bosom of the same soil that produced it and reconverted into new elements of life and wealth.

If the theory be correct as to individual States, it must be true when applied to the whole country—and national independence and wealth would be felt in every town, hamlet and county in this broad land, if this policy could be carried out. The following table of the estimated production of grain in 1847 has been compiled from the statistics of the proper bureau of the government:

Wheat crop,		114,945,000 bushels.	
Deduct Seed,	11,414,550		
Consumption in the country,	62,219,200		
		73,633,750	
Leaving a surplus of			40,611,250 bushels.
Corn crop,		539,350,000	
Seed,	6,000,000		
Consumption,	103,732,000		
Do. by animals,	230,963,096		
Distilled,	25,000,000		
		365,695,096	
			173,655,904 "
Rye crop,		29,222,700	
Seed,	3,650,587		
Consumption,	10,374,200		
Distilled,	10,000,000		
		24,024,787	
			5,197,913 "
Buckwheat Crop,		11,674,278	
Seed,	723,332		
Consumption,	6,000,000		
		6,723,332	
			4,950,946 "
Making the immense surplus of			224,417,013

which must find a market abroad or perish upon the farmer's hands. But there is no foreign market for it—and for a very small part of it at any time. I take from the same document an estimate of the average demand for our surplus. Great Britain, France, Holland, the West Indies, British American Colonies, Brazil and South America are the chief corn purchasing countries.

Great Britain requires about	20.000,000	bushels,
France, - - - - -	5,000,000	"
West Indies, - - -	2,500,000	"
British American Colonies, -	2,500,000	"
South America, - -	2,000,000	"
Holland, - - - -	1,000,000	"
Making an average demand of	33,000,000	"

which can be supplied by Russia and the country on the Baltic.

I cannot take up time to enquire what is to be done with the surplus of our productions, or to discuss the effects upon our prosperity as an agricultural people. We can supply all the demands of Europe with our surplus, though her millions should be starving, and still "have enough and to spare." Our surplus is enormous, and the prices which we receive are not remunerating to the labor employed in their production. It is mainly for the reasons above mentioned. The agriculturist expends too much in getting it to market to the consumer, and the consumers bear no just proportion to the producers. The supply exceeds the demand and the market is too remote. Increase the number of consumers and the surplus will diminish, and prices will advance, and the certainty of a market will ensure a steady production of every necessary commensurate with the demand. The farmer will know what he is to get in exchange for his produce, and what will be left as a profit for his capital and labor, and may well calculate what will be added at the end of the year to his stock.

The greater the demand made upon the capacity of the land of any country, by the wants of the community dependent upon it for the means of supply, the more will the power of production enlarge by the increased skill practised in its cultivation and the fertilizing agents employed—and the concentration of population tends to larger amounts of agricultural productions from small surfaces, while the lands of every country uniformly deteriorate under a sparse population, and as the demand of the home market diminishes.

If the theory which I have sought to establish be

correct as a truth of political economy, of which I entertain no doubt, and which the condition of England and Belgium and the opposite condition of eastern Europe and India clearly demonstrate, and as is proved by the improved state of the agriculture of Massachusetts and Connecticut, and the waste land and depopulated state of portions of Virginia and of our own State, it is manifest what is the remedy to arrest this growing evil and to restore our lands to fertility and productiveness. Emigration to the West must be arrested. Our population must be increased. The consumer must be brought to the producer. There must be an exchange of commodities and productions. The farmer and artizan, the mechanic and manufacturer, must be placed along side, and the country must produce and manufacture for its own consumption, and the lands be made to produce to their utmost capacity, and after supplying the home demands and making exchanges for every article which can be grown and manufactured at home to supply its wants, exchange its surplus for foreign luxuries, or invest it as a fund of increased wealth.

I state it as a principle of political economy which I think well established by facts, that no country has improved in agricultural wealth where population has diminished, and the corollary necessarily follows, that the productions of a country will be in the ratio of the demand upon it for consumption to its utmost capacity of production. Look to the great State of New York, rich in all the resources of agricultural wealth, and in every part of the State has the land lessened in productiveness except in the neighborhood of the large cities and manufactories. The wheat crop of the State is said to have diminished from an average of twenty bushels to thirteen per acre, and from the more sparsely settled portions of the State, her people are emigrating and seeking new homes in the West. Look again to Connecticut and Massachusetts. In those States the lands were not so fertile, but in each of them, the population is steadily increasing and the lands becoming more productive and profitable. The State of New Jersey also affords a remarkable example in aid of this theory. In no State of this Union were the lands poorer, yet no where does the farmer receive more remunerating prices for his productions, and in no part of the country are the lands improving faster than in portions of this State. Her old fields have been restored to productive husbandry, and her sand banks rescued from sterility, and can vie in productiveness with the best lands of the country. Her population is increasing. She has learned that the true system of agricultural improvement is to afford facilities to the production of all articles necessary for her consumption—to create a market at home—to bring the loom and the anvil, the tanner and the shoemaker to the plough, that they "may flourish in social proximity."

In the views which I have given I desire to be understood, not as advocating the establishment of large manufactories in this county to compete with those at the North and East with a view of supplying the general demand of the country. Although I regard the policy of home productions for home consumption, as a principle of political economy worthy of all consideration, and as the basis of national wealth and independence, yet we may not possess the natural motive power, which is so abundant and can be so easily developed elsewhere. But it is a question of grave importance, whether we may not manufacture and raise many articles to advantage rather than be longer dependent upon other communities for them. It is within the knowledge of all who hear me, that we purchase many articles which should be raised or manufactured in the county—how much is expended abroad for shoes, and how much is and has been sent off for the purchase of horses. These are heavy items of expense, which lessen our means, and might well be dispensed with by rearing the one and manufacturing the other in our own county. There are others which I have not time more particularly to mention.

The advantages of manufacturing as far as practicable, are apparent to every person, in the home market for many productions which are now of no value to the farmer, in the saving of time and cost of transportation of such articles as would be required by the population of those factories for consumption; and not the least in the saving of manure to the country, by consuming its products at home and returning the coarser particles to the land for the reproduction of plants; and to increase the fertility, the power, and capacity of the land.

It is clear then, that every community is interested in the welfare and prosperity of every member of it, and that, like the individual members of a family, each should contribute to the interest and advancement of the others. A system should be commenced, and let those who are interested, and have public spirit and leisure and means to aid in building up a system, unite their efforts, and a few years will shew the result in the increased fertility of the land, the greater amount of productions, and the general wealth and prosperity and happiness of our country. Economy must be practised in all things; not that mistaken false economy which seeks to hoard up pence and denies the enjoyments of comforts within our reach, but that enlarged and liberal economy, which teaches that no labor or means should be wasted or misapplied in seeking a foreign and distant market for productions which should be consumed at home; in paying in freights for transportation of coarse and bulky articles to distant consumers, which should find a market in exchange for commodities that can be made by our skill and industry.

The instincts of the human heart will operate to prevent emigration, if inducements are held out to our citizens to remain. Why should they not? Why seek another home and abandon that to which nature and instinct have bound them with hooks of steel? Is there a fairer country than this? Is there one possessing more advantages? Is any more productive than this was and may again be? We have rich alluvial deposites upon our swamps and creeks, and beds of shell and marl in great abundance, capable of recruiting our exhausted lands, and the means and facilities to improve them to any desirable state of fertility. There is no fairer country—mild and genial in its climate—midway between "the snows and driving sleets of the North, and the poisonous exhalations and burning suns of the South"—we have neglected the advantages with which a bountiful Providence has blessed us, and with all its means and facilities we have diminished in wealth, and our population has departed to seek other homes which in time will be reduced to the same sterility.

If encouragement to labor and enterprise is afforded—if the prospect of a market for the products of industry is before them—if there is a hope that, such productions as may be supplied, will find consumers, so that our waste lands may be restored to fertility, strong would be the motive and necessity which would tear our sons from the land of their birth,

where there are so many endearing associations to bind them to it—so many hallowed recollections to fill their hearts, and elevate, ennoble and purify their feelings. That attachment which man feels for the spot of his nativity, like the love for his mother, can never be destroyed. Neither time nor distance can wear it out—but in every land and in every climate, under prosperous or adverse circumstances, it lingers around his heart "like the echo," which floats amid the hills and valleys with faint and "melancholy note," when the sound which first woke it into existence is gone and gone forever.

For the American Farmer.

"ELEMENTS OF AGRICULTURE"—KLOSS WHEAT.

BY A PATUXENT PLANTER.

"Elements of Agriculture, for the use of Primary and Secondary Schools, translated from the French, by F. G. Skinner," is the title of a little book which I have lately received from the author. Every man of reflection has long deplored the want of proper books on the subject of Agricultural Science, to be introduced into our primary schools—books which would fit the youth of our country for that profession to which nine-tenths are, at earlier or later periods of their lives, called, by either necessity, chance or inclination. All who are practical farmers are often called to lament that defect in their education, and to grieve that our sons are without books which are adapted to their comprehension and arranged in such order as to make plain and easy the great truths and principles upon which Agriculture is founded, and without a proper understanding of them, cannot be successfully pursued. The book before me is a "*plain, intelligible, elementary work on the principles of Agriculture*," and well adapted to the use of young scholars in our primary schools. It is divided into three parts—NATURAL HISTORY, CLIMATE, MINERAL, ANIMAL AND VEGETABLE MANURES. Its subdivisions are in lessons of convenient length; and at the end of each lesson are questions upon the subject of the lesson. Its style is clear, concise and intelligible to the commonest mind. It is but the beginnig volume of a series, yet, as far as it goes, complete in itself. It will, I trust, and have no doubt of, be introduced into every primary school in the country, and ought to be in the town schools also. If the plan of the French authors be followed out by future volumes, more comprehensive, more elaborate, more in detail and more learned, as they follow in succession, so as to embrace the whole Science of Agriculture, upon the plan of *this* little, initiatory volume, then, indeed, will it be in the power of every man to become skilled in the science, by means of a system as easy to comprehend, and as gradual in development, as is that beautiful system of arithmetic by which the child is now taught to solve abstruse mathematical problems, by means of his "*Mental Arithmetic*," before he can make "*pot-hooks* and *hangers*," as old time teachers used to begin with in learning the young ideas to *spread themselves* on paper. Mr. F. G. Skinner is a ripe French scholar, translates with ease and grace, and he can do the agricultural community no greater service than by translating and publishing the future works of these authors, adapting their views to the agriculture of America, as he has done, with great judgment, in this little volume. This book is, beyond doubt, the commencement of a new and bright era in the education of our children, fitting them to assume the high position which the agricultural profession requires them to take, and which is absolutely required of them in this enlightened age of progressive knowledge; for, if ever the axiom was worthy of note, it is so now; therefore, let every young man, particularly farmers, remember that "*knowledge is power*."

KLOSS WHEAT.—This variety of wheat is now considered, in this region of the State, as the best variety, all things considered, that is to be found. It has but one rival, (and that is admired only by a few) the *Zimmerman*. As it is so popular, and, hereafter, its history may become a subject of interest, I send you an authentic account of it, along with the history of its introduction in Anne Arundel Co. I cannot do so in a better manner than giving you the letter of Dr. Benj. Watkins, of Anne Arundel Co., a successful farmer in that rich and productive section which stretches for miles in length, North and South of Davidsonville, and parallel with the Patuxent, being the stiff high lands that overlook the light, sandy valley between it and the river. This beautiful and fertile wheat-growing region of which I speak, extends about fifteen miles in length, and three to five in breadth, between the Patuxent and South rivers. In this whole section, once so famous for heavy crops of tobacco, dark and *juicy* as James river, when put up in *pig tails*, little or none is grown now, and it is becoming a beautiful *farming* country, where the people are alive to their best interests, by investments of time and labor in the farmer's best bank—the manure heap. But I wander from my subject: here is the Doctor's letter:

LOCUST HILL, Nov. 2, 1849.

* * * * * As you are a contributor to the agricultural journals, perhaps the cultivation of this seed will not be uninteresting to you. I obtained from the Hon. Alex. Randall, in the summer of 1843, about a wine glass of wheat, with the enclosed letter. Such was my admiration of the quality of the "*Blue Stem White Wheat*," that I was determined to try my hand in the cultivation and extension of it. In October, 1843, I sowed the wine glass, and reaped, in 1844, 42 wine glasses as pure wheat as the original. In 1844, I sowed 41 wine glasses, (measured) and reaped, in 1845, 4½ bushels of pure wheat, with some mixture of red. In 1845, I sowed the 4½ bushels, on about six acres of land, and in 1846, reaped 55 bushels of ordinary wheat. It was much affected by the rust. I winnowed it down to 41 bushels, and sowed that on about 25 acres of land; and I got from it about 325 bushels. The land on which I sowed that year was flat and was much injured by too much water in the land. In 1847, Messrs. Hodges and myself seeded of it about 223 bushels, and this year's yield has been upwards of 3,000 bushels; so that, in 5 years, if all had been converted into seed, I should have had about 4,500 bushels. I have no more confidence in this than any other wheat as being free from the attacks of rust, fly, &c. My humble opinion is that all wheats, of every complexion, are more or less subject to diseases incident to wheat. The greatest guaranty to a good crop is the frequent changing of our seed from North to South. The cockle in this sample is from the land formerly seeded with such wheat; and how to get clear of it, I know not. I am using the precaution to deposit all of the refuse in some stream that will carry it successfully off of my farm instead of mixing it with my manure. I find its germinating qualities very difficult of destruction. It will remain buried in the land for years; and, if

ever turned up to the influence of the sun and atmosphere, it is sure to come up. The *cheat* I believe to be a degeneracy, inherent in wheat. Garlic is natural to some lands, and if sowed on land not adapted to it, will not incommode you.

My crop this year was, from 73 bushels, sowed upon about 50 acres, 1,400 bushels—pretty good for Anne Arundel County lands, at the cost of improvement of 5 quarts of clover seed and 1 bushel of plaster once in 4 years. I farm on the four field system.

I enclose this letter that you may refer to it in the coming year, if the products of this year's seeding of this wheat be an object, knowing that it will meet with better deserts in your hands than mine.

I am yours, most respectfully,

BENJ. WATKINS.

—

PATENT OFFICE, January 25, 1843.

SIR: I take pleasure in transmitting a very beautiful sample of "Kloss's White Blue Stem" wheat, and refer to the Hon. John Snyder's letter for a description of its origin and properties. The same letter will inform those desirous of a larger quantity, where to apply. I also send a sample of Valparaiso wheat, just received from South America.

I am, most respectfully, yours,

H. L. ELLSWORTH.

Honorable Alexander Randall.

—

HON. HENRY L. ELLSWORTH,
Commissioner of Patents.

DEAR SIR: The bushel of wheat I have sent you is the product of my county—Union, Pennsylvania. Its origin is briefly this: My neighbor, Christian Kloss, saw, in his field of Blue Stem wheat, a single top proud head; he was struck with the contrast between it and the wheat of the whole field, this being the only white head in it, and much the largest. At harvest time he secured the head and seeded it in his garden the coming fall; (I do not recollect the time, perhaps six years since;) he divided the next year's produce amongst his neighbors, and last fall there was, perhaps, 1,000 bushels of this seed sown; one Farmer had 400 bushels: It is called Kloss's White Blue Stem. The wheat I send is the growth of last year; it will be recollected our country was filled with rust and smut—this wheat escaped, yet it is not quite as full in the grain as the crop of the preceding year. It weighs 65 lbs. per bushel. We have the Mediterranean wheat in our county—the White Blue Stem is considered far superior. Hoping it may prove useful to the agriculturalist, it being a Pennsylvania staple, I hazard nothing in recommending it as the best wheat in the northern part of the State, and quite the best I ever saw.

Truly yours,

JOHN SNYDER.

January 18th, 1843.

IMPORTANCE OF ASSOCIATIONS AND LABOR SAVING MACHINERY.

NOTICE OF MR. CAREY'S ADDRESS.

To the Editor of the American Farmer.

Associations of men, for effecting the various purposes designed for common benefit, have been justly regarded, perhaps, in all ages of the world, among the most efficient means of insuring success to the objects in view. And why? Because in no single individual is found the requisite amount of capacity, either physical or mental, to effect all that may redound to his own advantage. But where the united energies of the intelligent and well informed portion of communities become concentrated, a moral as well as physical force is rendered available, which is often found sufficient to overcome obstacles, which even the credulous have scarcely conceived of as within the range of possibilities.

I propose to illustrate the truth of the above proposition, by supposing an intelligent and well informed individual in regard to general subjects, to have placed himself in an isolated position, some twenty years ago, in almost any State in our Union, liberally provided with all that his most diligent enquiries and the most ample means, could have enabled him to obtain as an outfit for conducting his operations as a farmer. I will allow him to have been during the space of twenty years industrious and attentive to his business; but at the same time neglecting all the opportunities of acquiring "knowledge, which is power," by communication with others engaged in similar pursuits, excluding from his domicil the approach of all such, for fear, perhaps, that others might derive advantages from some favorite system or plan of his own, in which event there would be competitors with him in the market, for, it might be the tenth part of a cent. I will also suppose it to be entirely in agreement with such a character, that he has become satisfied with all his own modes of operation, and almost as a necessary consequence, has become so strongly prejudiced against what he has heard termed "book-farming," that he not only fails to subscribe for, but rejects the very idea that any benefit may result to him from the perusal of an agricultural paper. Thus he has existed for twenty years as a farmer, and every year mowing forty or fifty acres of heavy grass, and raking the whole of this together according to the mode practiced when he was a boy, never having seen, or perhaps heard of a revolving horse-rake, the use of which modern implement alone would in such a crop as has been supposed, have saved him in each of the fifteen years during which it has been in use, not less than its cost ($8 or $10) every day that it was properly brought into use, independent of the advantage resulting from the fact that his hay might have been secured in so much less time, and consequently at less risk.

Let us now enquire, how much his want of information and wilful neglect has cost him in this one single instance?

To secure the proposed amount of hay, he has probably paid, (including board) one dollar per day, to ten hands for two days raking in each year.

This in fifteen years amounts to	$300.00
First cost of rake $10, and with care one will last fifteen years with repairs to the value of 50 cts. each year, which, together with the first cost and interest on that, amounts to	26.50
	$273.50

Add to this at least $20 for the cost of hand rakes during the period in question, saying nothing about repairs and interest on cost, and the farmer stands fairly taxed with a clear loss in fifteen years of the enormous sum of $293.50, for the want of this single and simple, though most efficient implement and labor-saving machine.

If this is really the result of thus lagging behind the age in this single instance, and we will reflect for a moment, we may readily perceive how vitally important it is for farmers to avail themselves of all

the means within their reach to acquire the requisite knowledge for prosecuting their business with success. When my reflections have been running in this kind of current, I have often come to the conclusion, that we may reasonably expect benefits to result from our associations called agricultural societies, the amount of which can at present scarcely be estimated. I was present at the late meetings of the State Agricultural Society of Maryland, and an attentive observer of passing events as they occurred at the Fair, and surely, methinks, the spirit there manifested in favor of promoting the great interests of agriculture, was predominant over every other consideration that engaged the attention of those assembled. Was there a farmer, or manufacturer of farming implements there, who did not feel amply rewarded for the part he had taken in the matter? Surely not one. Then let us strive, in a spirit that seeks the welfare and the good of all, (for each and every one has a deep interest at stake) to exert ourselves like men in the support of an institution, which, if conducted as it has been begun, promises so rich a reward to those devoted to its objects. After a careful perusal of the address delivered by *Wilson M. Carey*, before the society, on the 10th of November, and published in the American Farmer of December last, I have come to the conclusion, that it contains an amount of information and instruction, which we rarely find equalled in similar efforts. I write thus in regard to this address, not for purposes of adulation, for I feel as far above being actuated by such a motive, as I believe its author does above being influenced by it. But I refer to it in all soberness and candor, for the purpose of soliciting for it, the close attention of every farmer and mechanic in our land.

If the isolated farmer before alluded to, could have seen that production, and had practiced upon the wholesome truths there set forth, how great a difference might there have been in the results of his labor! results that might have had an important influence upon others as well as himself. For even upon his mind, secluded as he was, some brilliant light may have dawned, which, had he "placed it upon a candlestick," instead of keeping it "hid under his bushel," might have gone on to increase in brightness till it "gave light to all who are in the house," or in other words, to all who are engaged in similar pursuits. "Farmers of Maryland," let us unite cordially in giving our support and encouragement, by every means in our power to such measures as are calculated to place our agricultural societies upon a footing which will enable them to assist us all in taking a "strong pull, and a long pull and a pull altogether." VINDEX.

January 4th, 1849.

THE OSAGE ORANGE.

To the Editor of the American Farmer.

SIR:—I notice in the 7th number, vol. 4, of the American Farmer, several enquiries relative to the best method of raising the Osage Orange Hedge.—This being a subject in which I feel some interest, and therefore disposed to contribute any information which I may possess (little as it may be) relative to the matter, which information however does not arise from any actual experience of my own, but from that of a friend, long and extensively engaged in the raising of the Osage Orange Hedge, not for sale or market, but for his own extensive enclosures.

In the spring of 1846, I made a special visit to see my friend residing in Cincinnati, to obtain from him as much information as possible relative to the best mode of raising the Osage Orange. My visit was attended with much pleasure, for it afforded me an opportunity of seeing the Hedge under cultivation and receiving much useful information, from one of ten years experience in its culture.

The tree is believed to be a native of the south, and is found in great abundance there in many places, but more especially on Red river, Arkansas; it has an excellent constitution, is a long liver, and readily becomes acclimated to almost any region—the wood is hard and tough, and is armed with innumerable thorns, in size and shape closely resembling the spur of a full grown game fowl; the fruit is beautiful but unfit for use, and in external appearance not much unlike the common orange. A pound or quart of seed will number about seven thousand—not more than three-fourths of which, however, may be expected to sprout and come forth.

For raising the Osage Orange, the ground should be well prepared but not too highly manured, but the growth of the plant would become too vigorous, and require much more labor to train and keep in subjection, than if planted in soil but moderately rich.

The Osage Orange may be raised from the seed, cutting or root; the seed however is considered most preferable.

The best time for sowing the seed is in the *fall* of the year, as early as they can be procured from the recent fruit; they should be sown in nursery beds, two or three feet wide, and covered with fine earth about three inches deep—should the season be dry, frequent waterings will be beneficial; many of the seed will not sprout up the first fall and winter, but remain under ground till the following summer, which should teach us the advantage of permitting the beds to remain undisturbed for that period; these beds should be kept free from weeds and grass at all times.

The spring of the year is the proper time for setting the hedge, and the plants should be transferred from the nursery for that purpose as soon as they are large enough to bear the operation with safety: which will be the case with a large proportion of them, the first spring after sowing the seed; the late sprouting of course will not be large enough for transplanting till the spring following.

Experience has shown, that to make a good (or the best) hedge, there should be a double row of plants, and the best and most convenient mode of setting out, is first to prepare a trench sixteen or eighteen inches wide and about three inches deep, along which should be stretched a line of indefinite length, marked every twelve inches; the plants of one row should be set touching each mark on the line, and the plants of the other row, should be set midway between the marks, and six inches distant from the line, (which arrangement from a moment's reflection will show the impenetrable nature of the fence when grown,) the roots should be covered with fine earth, to the depth of about three inches, which should be slightly pressed or settled down, to give firmness to the setting, and secure the plants from disarrangement by the winds, &c., and here, if the season be dry, the watering should be continued.

One year after setting the hedge, (say late in the following spring,) the plants should be cut down to within two inches of the ground, which will have the effect to make them stool or branch out freely. One year after the first cutting, they should be cut down

again, sixteen or eighteen inches from the ground, which will cause another crop of branches to be thrown out. After which they should not be cut again, till arrived at the height which may be required for the full grown fence, say four, five or six feet; the lateral branches however (should there be any) may be cut or trained in, at any time which may best suit the cultivator.

The hedge should be protected for the first three or four years, otherwise the cattle will browse on the young twigs and foliage, which will destroy and materially injure its growth.

A hedge in this way may be brought sufficiently forward in five or six years, to deter or resist, the most determined fence breaker in the land, and may with care and attention be made so close (using the language of my friend) as to almost bid defiance to a mouse.

This fence will not require more attention and labor annually to keep it in order than would be required with other fences.

In the fall of 1847, I sowed about three pounds of Osage Orange Seed in *poor ground;* they sprouted and came up tolerably well, and many of the plants were sufficiently large to transfer to the hedge in the spring of '48, but owing to the want of proper and timely arrangements, they were permitted to remain in the nursery, which I am persuaded has been rather a disadvantage to them—besides putting back the maturing of the fence for one year, which is a matter of some moment.

I think I may with much propriety take the liberty of recommending the Osage Orange as a tree which may be fully relied on, for the growing of a good, lasting and substantial fence; and for the protection and fencing in of *orchards*, &c., where the nocturnal visits of the lovers of good fruit, become too frequent or annoying, nothing can be better.

Yours Respectfully,
J. DIMMETT.

Forks of Gunpowder, Baltimore County, Md.

We are indebted to Mr. Bateham, Editor of the Ohio Cultivator, for the following communication on the

CULTURE OF THE OSAGE ORANGE FOR HEDGING.

To the Editor of the American Farmer:

SIR:—In the January number of your paper, page 211, I notice some enquries and answers in regard to the culture of *Osage Orange plants* for hedges; and as I have given much attention to this subject the past three or four years, I will, with your permission, offer a few suggestions on one or two points in regard to which I think your instructions are deficient or likely to cause disappointment.

1. *Preparation of the Seed.*—If the seed is planted or put into moist earth immediately after taken from the fruit in the fall, *so as not to become dry*, it will grow freely in the spring, without any preparation; but after it has once become *dry*, as is necessarily the case with all the seed sold in this country, it will seldom, if ever vegetate freely when sown in the spring, unless previously prepared by long soaking or freezing. I have sown more or less of the seed each spring for three years past, and have sold much of it to others; and as the result of my observations and experiments I now give the following directions, which if carefully observed will ensure success, if the seed is good—and it will grow when two or three years old, if plump and not damaged by heating.

If the soil is light and sandy, so as not to bake hard in spring, sow the seed in the fall; if otherwise, or the seed is not obtained in time, mix the seed with sandy earth in a box, (not water tight,) wet it thoroughly, and set where it will be exposed to freezing and rain, and not become dry, until planting time. Or, if the seed is not obtained till spring, soak it in water, in a warm room, for *five or six days*, then pour off the water and mix with fine earth, and let stand in the room for five or six days more, or until it begins to sprout; then sow in good soil, like you would peas or beets, and the plants will soon appear. The seed should not be sown earlier than about the first of May, or the time for planting corn, as it requires warm weather to cause it to vegetate.

2. *Planting.*—On tolerably good soil, the plants grow so rapidly that they should not be more than *one year* old when transplanted to the hedge-row—inasmuch as the roots grow very long and deep, and would be much injured by digging at two or more years old. In this region the plants grow from one to three feet high the first year from seed, and more than twice as high the second. They continue to grow rapidly for three or four years after planting, then as the hedge thickens, with the effects of frequent clipping, the growth becomes slower, till at ten or twelve years old, on ordinary soils, it is not much more rapid than that of the English or American Hawthorn.

In conclusion I would only say, that after having repeatedly examined the oldest hedges of Osage Orange in this country, as well as many of the best hedges of other plants in this country and in Europe, I am fully persuaded that the Osage Orange is in all respects vastly superior for this purpose to any other plant known; and I have not the least fears of its being pronounced a *humbug*, or "multicaulis speculation," by any men who have sufficient sense to understand the *utility*, or taste to appreciate the *beauty* of a perfect hedge.

Respectfully, yours, &c.,
M. B. BATEHAM.

Columbus, Ohio, Feb. 16, 1849.

OATS ON POOR LAND.—A correspondent writes us thus:—"I have 10 acres of very thin land which I design to put in *oats*, but have not manure to put upon it, and do not like to incur the expense of Guano; can you suggest any cheap compost that would ensure a tolerably fair product? Your early attention to this will oblige A YOUNG FARMER.

In reply, the editor of the American Farmer would recommend the following mixture for the ten acres in question, and thinks he can promise his correspondent a good crop of oats. The ingredients of the compost would cost about $20, about $2 per acre—a sum as low as any one should desire to impart productiveness to his land for. Let our correspondent mix 500 lbs. of the sulphate of soda, 3 bbls. of plaster, 20 bushels of ashes, and 20 bushels of bone-dust well together, and sow the mixture on his lot broadcast, after the ground shall have been well ploughed and harrowed: a good crop of oats will be the result. The oats should be sown after the compost shall have been broadcasted, the whole then to be harrowed in together, and the ground well rolled.

THE AMERICAN FARMER.

BALTIMORE: APRIL 1, 1849.

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SAMUEL SANDS, Publisher,

At the *State Agricultural Society Rooms*, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

Maryland State Agricultural Society.

The Quarterly Meeting of the Board of Managers, comprising all the officers of the Society, will be held on the FIRST WEDNESDAY IN MAY, at 10 o'clock, A. M. at the Society's Hall, 128 Baltimore-st. As business of much importance will be brought before the meeting, a general attendance is desired. The members of the Society, who can make it convenient, are also invited to attend.

By Order, SAML. SANDS, Rec. Sec.

TO SUBSCRIBERS IN ARREARS.

We have recently notified those who are in arrears for subscription to the Farmer, of their indebtedness—and many have liquidated the same. Those who may not have paid attention to our request for a settlement, on failing to receive our journal after the present volume, may understand the reason thereof. We believe we are engaged in a "good work," and are doing some service to the State—and we are desirous of extending our usefulness—but this can only be done by promptness on the part of our subscribers. We shall regret to part with any of our old friends, but as before remarked, we are *paying taxes to our city and State, on their indebtedness to us;* and it is a *little too tough* to supply them with their monthly reading, and *pay for the privilege!* There are names on our books, opposite to which are evidences of indebtedness for years, and we have reason to believe that most of those thus indebted, are amongst the wealthiest men of the country, and through neglect of so small a matter, have permitted their accounts thus to stand. We have had long suffering and patience in regard to them, and must at the time designated above, put the amount due us from such to "*profit and loss*" account, thereby saving at least the payment of the tax for the high privilege we have enjoyed of furnishing them with our monthly lucubrations.

TO CORRESPONDENTS.

The following valuable papers will be given in our next No., viz: The Essays on Draining, by Messrs. Newton, and Wilkinson, to which the committee of the State Society recommended prizes to be awarded—A paper on the erection of Lime Kilns and Burning Lime, by Mr. E. Stabler, of Montgomery county—Mr. Thomas Johnson, on the Culture of Grain in Great Britain—"R. S. W." on the Rights of Labor—A second letter from "E. F. R."—J. S. Stevenson, on the Culture of the Sweet Potato, &c. These papers should have appeared this month, but the number of communications omitted in the March No. and inserted in this, (and some of which are now, we fear, almost too late for the present season) have compelled us to defer them until our next. Our readers may expect an intellectual treat, and a valuable addition to the fund of agricultural information.

SEEDS.—We are indebted to the Hon. Mr. Burke, Commissioner of Patents, for a package of seeds of various kinds, for distribution. They are placed in the Agricultural Society's Rooms for that purpose.

We are also indebted to Capt. Perry, of the Navy, for a box of Sicily Clover Seed, and sundry samples of Tuscany and other Wheat, for distribution. We have also received from Mr. Robt. Wallace, of Dorchester county, a package of Mimosa Seed.

THE FARMER'S EXCHANGE.

The following Circular has been addressed to the Publishers of the various newspapers in the State of Maryland, and others, by the President of the State Society. The manufacturers and seedsmen, will, of course, without delay, avail themselves of the privileges granted, and have their cards neatly framed, and placed in the Society's Hall.

Maryland State Agricultural Society's Rooms,
Baltimore, March 21st, 1849.

SIR:—As a suite of Rooms, over the American Office, engaged for the uses of the Maryland State Agricultural Society, are now prepared for the reception of visitors, I deem it a part of my official duty, in this public manner, to invite all agriculturists, and others favorable to the cause, to visit the same whenever convenient. One of the objects of establishing a Farmers' Exchange is, that those connected with the different branches of agriculture may meet and interchange opinions on the various subjects of general interest, in order that their united influence may be brought to bear in favor of such legislation as may be deemed beneficial to the welfare of the profession.

As the Society are about forming an Agricultural Library, all donations of books will be thankfully received; and all Implement Makers, Machinists, Seedsmen, and others having implements, machines, seeds, manures and other articles useful to agriculturists, are solicited to leave, at the rooms, cards, catalogues and samples of such articles as are manufactured or sold by them, in order that those desirous of purchasing may ascertain where the same are to be had.

You are earnestly requested to give the above information general circulation.

Your obedient servant,
CHARLES B. CALVERT,
President Maryland State Agricultural Society.

A Record will be kept also by the Secretary, of fine Cattle, Sheep, Swine, Poultry, &c. for sale; and it is earnestly requested that those having such for sale, will give a list and description thereof, with the prices. There is a continued enquiry for such matters, and it will no doubt greatly facilitate the operations of the buyer and seller by a due attention to this request.

COL. CAPRON'S BULL VALENTINE.

With the present No. we present to our readers a beautiful lithograph of Col. Capron's Short Horn Durham Bull VALENTINE, which took the first premium at our State Fair, in Nov. last. Valentine is one of the finest bulls in this country, and of a strain unsurpassed. The following is his pedigree:

VALENTINE, full bred Durham Bull, purchased of Dennis Kelly, Esq., of Pennsylvania, 4 years old, out of Cinderella, now owned by Mr. C. Calvert; sire Prince of Wales.

Cinderella was calved on the 20th April, 1838, and gotten by York, who was out of Young Jenny by Red Holderness; g. dam Old Jenny by imported Eclipse; Red Holderness by Holderness out of Flora by Denton; Denton by Old Denton, and he by celebrated Comet, sold for 1000 Guineas. Holderness

SHORT HORN DURHAM BULL VALENTINE

The Property of Col. Taylor

Lower Prince Georges Md.

"Which took the first Premium at the First Annual Fair of the Maryland State Agricultural Society Nov 1841
For pedigree see American Farmer for April 1842

Lith by E Weber & Co Balto

was bred in North Allerton, England, by G. Faulkner, Esq., and was exhibiited in 1839, weighing 2700 pounds. Old Jenny took a premium at the Hartford Cattle Show for sixty pounds of Butter made from her milk in thirty successive days.

Cinderella's dam was imported May Rose; g. dam Judy by Wizzard, got by Comus 1873, dam by Rufus 2576, g. dam by young Lancaster 1162; g. g. dam by Alfred 23; g. g. g. dam by Mason's Blaize; g. g. g. g. dam by Butterfly 104; g. g. g. g. g. dam by Collins' White Bull.

Prince of Wales, roan, by Maggot 2238, bred by the Rev'd. Henry Berry; dam Quince by 2nd Hubback 1428, g. dam Queen of Oak bred by Mr. Whitaker, by Mr. W's Edward 1002; g. g. dam Prettyface Mr. Whitaker's Frederick 1060 (son of Comet above mentioned); g. g. g. dam Pretty Lass, by Hubbard 291 (20 guineas); g. g. g. g. dam Pretty Maid by Duke 225; g. g. g. g. g. dam by Mr. Charge's Bull 872: g. g. g. g. g. g. dam direct to the Studleigh Bull.

MR. SLINGERLAND'S REPORT.

THE RIGHTS OF AGRICULTURE.

We are indebted to the politeness of the Hon. *Charles B. Calvert*, for a copy of the *Report* made to the *U. S. House of Representatives*, from the Committee on Agriculture, on the 19th day of July last, by the Hon. *John J. Slingerland*. We have read this report with great pleasure. It comprises a vast amount of useful information, is written with great ability, and reflects much credit upon its enlightened and patriotic author. Although it does not recommend appropriations by the General Government for the establishment and support of Agricultural Schools throughout the Union, it very clearly illustrates the necessity which exists for such educational institutions, and, in the following paragraphs points out the *way* in which the agriculturists of the country can obtain them. The report says:

IMPORTANCE OF EDUCATING THE FARMER.

"It is calculated that the division of the occupations of men in the United States is nearly in the following proportions:

Number engaged in internal navigation,	- - -	33,076
" " in ocean navigation,	- - - -	56,021
" " in the learned professions,	- - -	65,255
" " in commerce,	- - - - -	119,607
" " in manufactures,	- - - - -	791,741
" " in agriculture,	- - - - -	3,719,959

"Thus it will be seen that those engaged in agriculture are three and a half times greater in number than those in all the other divisions. The agriculturists have the *physical* and *numerical power, and can at any time control every government in the United States, and give tone to public opinion.* BUT DO THEY? *No, indeed; for however powerful they may be in number, they are weak in influence;* and this arises from want of proper education. The sixty five thousand two hundred and fifty five, engaged in the learned professions, are intellectually stronger than the three millions seven hundred and nineteen thousand nine hundred and fifty-one engaged in agriculture, and therefore *rule* them. If it were not so, seven-eighths of the offices in the country would not be held by lawyers and doctors; nor would all the colleges and high schools be endowed, principally, for the benefit of the learned professions."

"FARMERS, *when will you arouse yourselves to the dignity and importance of your calling*, and educate yourselves to that height of intelligence which will make you the *rulers*, instead of the *ruled*, of the other professions? *There is surely nothing to prevent this, if you will only be true to yourselves.* EVERY OCCUPATION IN THE COUNTRY SEEMS TO BE BOUNTIFULLY PROVIDED FOR, SAVE THAT OF THE FARMER, AND SURELY NO ONE IS TO BLAME FOR THIS BUT YOURSELVES; FOR IF YOU CHOOSE, YOU NEED ONLY SPEAK TO YOUR SERVANTS, YOUR RULERS, AND A REFORM MIGHT BE HAD AT ONCE?"

We thank, sincerely thank, Mr. *Slingerland*, for this *appeal* to the pride and interests of the agriculturists of our country—and, in their name, we tender him their acknowledgements and gratitude, for the service he has rendered, in pointing out the way their grievances may be redressed. It remains now with the *Farmers* and *Planters* themselves, whether they are, or are not, longer to remain, as they have ever been, the proscribed of the land. They hold the numerical power of the government, and it is for them to decide, whether they will so exert it, as to secure to themselves that justice which is alike due to their noble occupations, and to the common interests of the country. If they sit supinely still, and ask for nothing, they will assuredly receive nothing; but, if, feeling their just importance in the scale of society, they ask for what the welfare of the Republic requires they should have, they will get what they may ask for, as we take it for granted, that they will not ask for anything that would not redound to the common benefit and good of the whole country.

We have before enjoined it as a duty upon the *Agricultural associations throughout the country, to forthwith get up memorials to Congress, asking for such* DONATIONS OF THE PUBLIC LANDS *to the several States of the Union, as will enable the respective State authorities to establish and maintain agricultural institutions in the several Congressional districts, for the better education of the rural population*, and taking courage by the recommendation of Mr. *Slingerland*, we repeat our former advice. And, as there is nothing like seizing the present moment to advance any interest, we call upon them to act with promptness. There are hundreds of millions of acres of the public lands, which are lying idle, and serving no earthly good purpose, which might be appropriated to make the rising agricultural population enlightened, scientific farmers and planters, and thus add alike to the physical and intellectual strength of the nation; for we do hold it as an incontrovertible truth, that a properly educated yeomanry would prove the safeguard of the Republic, and the bond of the Union.

☞The duty of the *officers of the agricultural societies, and clubs*, is now as plain as imperative. They should get up such memorials, place them in the hands of energetic men to obtain signatures, send those memorials to the next Congress, appoint committees to attend to their interests at Washington,

and our life upon it, success will crown their efforts, as it would be an easy matter to obtain several millions of signers, whose voices would not fail to be heard and heeded in the National legislature. The State legislatures must also be approached, to back the claims of the agricultural interests.

PROTECTION TO AGRICULTURE.

President TAYLOR, in his "Inaugural Address," uses the following language:

["*It shall be my study to recommend such constitutional measures to Congress as may be necessary and proper to secure encouragement and protection to the great interests of* AGRICULTURE, *Commerce and Manufactures.*"]

We are free to confess that we are highly gratified to find that President Taylor, in his first official address, has thus emphatically recognized the *claims* which the agricultural interests have upon the "encouragement and protection" of the government; for if a stranger to our institutions were to look into the statute books to find out what were those interests which were of sufficient importance to be deemed worthy of the fostering care of the general government, he could not fail to come to the conclusion that agriculture was not one of them. *Washington*, our first President, who presided over the Convention which formed the Constitution, did, in his first message, recommend to Congress to take action in behalf of Agriculture; but his recommendation was of no avail, and from that day to this, little or nothing has been done to advance the interests or promote the welfare of Agriculture. Though all are willing to acknowledge that agriculture is the greatest of every other interest of the nation—that it forms the foundation of all other interests, still no Representative in either branch of the National Legislature, has had the courage or the justice to stand up and claim for agriculture any specific grant or appropriation, with the object of elevating the character of American husbandmen—none to move an appropriation, either in money or in lands, to establish State Institutions for the education of the rural population of the country in the arts and sciences connected with the cultivation of the earth. This is the more provoking—the more mortifying—when the fact stands in bold letters upon every page of our history, that millions have been annually expended to encourage other and minor interests. If the question should be asked:—why have agriculturists been thus proscribed?—the answer is ready at hand—it is, because they have been too listless, too indifferent to their interests, to assert their rights, or to demand justice at the hands of the government. What their true policy is, is most easily pointed out. They should at once get up *memorials* in every neighborhood, in each State, respectfully asking for appropriations of the *Public Lands*, sufficient to establish and sustain a sufficient number of *institutions* to educate the sons of every farmer and planter in the Union, who may elect to send them there. In these institutions all the branches of those of the arts and sciences which may be applicable to the business and purposes of agriculture, should be taught. With such appliances, American agriculturists in a few years would be the most enlightened body of men in the world,—would comprise a phalanx, in whose hands human liberty would find champions as willing as competent to protect and defend it; for after all that may be said and sung upon the subject, an enlightened yeomanry is the surest bulwark against the inroads of tyranny and oppression—the only bond of security for a Republic is to be found in the intelligence and virtue of her sons.

THE HOME DEPARTMENT.

Our acknowledgements are due to that sterling and enlightened friend of agriculture, Gen. John G. Chapman, for a copy of the amended bill, entitled "*A bill to establish an additional department to be called the Home Department.*" It provides that in addition to the present executive departments, there shall be created a Home department, with the following officers, viz: a *Secretary*, an *Assistant Secretary*, a *Commissioner of Pensions*, a *Commissioner of Patents*, a *Commissioner of General Land Office*, and a *Commissioner of Indian Affairs*, which department is to have the care and custody of all matters relating to *Pensions*, *Patents*, *Public Lands*, *Indian Affairs*, and the *Census*, the supervision of the expenses of courts, and shall audit all accounts relating to the administration of justice. *The Secretary of the Home Department is to conduct such correspondence at home and abroad, as he shall think best adapted to promote the progress of Agriculture, and to obtain and publish the agricultural statistics of the several States of the Union, as also of foreign nations.* The salaries are as follows: The Secretary, $6,000—Assistant Secretary, $3,000—the several commissioners the same salaries as are now allowed by law: the Secretary is authorized to employ in the several bureaus the same number of clerks and other officers as are now authorized by law, and to employ not exceeding five additional clerks to carry the provisions of the law into effect: an appropriation of $20,000 is made to carry the law into effect.

We are pleased with that feature of the bill which provides for a superintendence over the interests of *Agriculture*, because it *recognizes* the FACT, that agriculture really is a part and parcel of, and has an identity of interest with, the other classes of society—a *fact*, if we were to judge by the marked neglect with which it has been heretofore treated, was considered of equivocal fixedness.

This *recognition* will do for an *entering wedge*, for the present, and it will remain for the husbandmen of the Union, so to use their numerical strength in future elections, as to make their representatives *know*, that they have not only *rights*, but the resolution to maintain them—*it remains for them to insist*

upon appropriations of the public domain being made, sufficiently ample, to establish and support agricultural institutions throughout the country for the education of the sons of every farmer and planter in the country, who may desire to see them thus qualified to pursue rural occupations. All other interests of the country have been munificently cared and provided for—and we would ask—"WHY SHOULD THAT OF AGRICULTURE, THE NOBLEST AND MOST USEFUL OF THEM ALL, HAVE BEEN SO LONG NEGLECTED?"

GEN. CHAPMAN'S ADDRESS.—The Address delivered by Gen. Chapman before the Charles County Agricultural Society, will command attention, as well by its ability as by the startling statistical facts which it develops. The truths, which it so lucidly discloses, cannot fail to address themselves to every reasoning mind; they must excite thought and awaken reflection, and, as we hope, will lead to action. *We are pleased to find that the General is alive to the importance of Agricultural Education, and we shall indulge the hope, that his first act on the opening of the next session of Congress, will be, to move that the Committee on Agriculture be instructed to report a bill, making liberal appropriations of the public lands, to establish and maintain agricultural institutions in the several States.* General *Taylor* in his inaugural, declared himself favorable to the "encouragement and protection of agriculture," thereby *inviting* the Representatives of the people to the discharge of their duty, which will be, to give form to the kind and nature of "encourment and protection" to be given to the *great interest of this*, as agriculture is, of every other civilized country in the world.

STATE AGRICULTURAL CHEMIST.—On another page will be found an interesting paper from Dr. Higgins, the State Agricultural Chemist, who is now diligently engaged on the Eastern Shore, in fulfilling the duties of his appointment. His communications are always acceptable.

GLOSSARY *of terms used in Agricultural Chemistry.*—We have been for a length of time endeavoring to obtain a good Glossary of the terms so frequently used by writers on Agricultural subjects. On a recent visit to our city, we stated to Dr. Higgins, the State Chemist, the want of such a guide, for the great body of the agriculturists of the country, and he promised to supply the same. We have the pleasure of announcing the receipt of the first part of it, and regret our arrangements prevent our commencing its publication this month. The Dr. in forwarding it, remarks:

"The Glossary which I send, is something more than a mere Glossary, but as it is at present, I think it better supplies the wants of a large part of the community. I will, however, receive any suggestions on the subject, and will change it if another form be more desirable. Without some such thing all of the recent works on agriculture are sealed books to those who would most faithfully apply their principles."

DRILLING WHEAT.—A respected correspondent in Kent Co., Md., writes us that he used one of Pennock's Drills last fall, and he is confident that although it cost him $104.50 delivered in Baltimore, the complete manner in which it put the seed in, and the saving of labor and seed, paid him for the outlay of the Drill, and that the wheat will stand the winter better than when put in in the usual manner.

WASHINGTON COUNTY AGRICULTURAL SOCIETY.—Messrs. Stewart, Zeller and Fitzhugh, the committee appointed by the President to invite some gentleman qualified to deliver an Address before the Society, having solicited Dr. J. O. Wharton to perform that duty, he consented thereto. The meeting was to have been held on the 26th ult. We hope to be able to obtain the address for publication in the "*Farmer*."

WORTON'S POINT, KENT COUNTY, MD.—A correspondent speaks in high terms of the improvement which is going on in this part of Kent county—from the free application of shell-lime. The efficacy of this lime has been doubted by some farmers of the neighborhood, but their doubts have been removed by proofs of its value wherever it has been properly applied. The section of the county from which our correspondent hails, was formerly considered the poorest and most intemperate—but a great improvement has been going on within the last few years, both in society and farming, and the time is not far distant, from present appearances, when that district will be able to compete with any part of that productive county, although it was nearly deserted at one time for the far West, and other unknown parts—but, says our correspondent, "since attention has been paid to her valuable and immense resources, such as shell banks, marl, sea ore, &c., which is calculated to afford more real pleasure than a pursuit after California gold, quite a spirit of improvement is rapidly spreading through the neighborhood. One of the farmers of the neighborhood has recently purchased *forty tons of Guano*, and doubts not but he will be pleased with its results."

AGRICULTURAL MOVEMENTS.—The New York State Agricultural Society have memorialized the legislature to establish an Agricultural Institution in that State.

The Board of Agriculture of the State of *Ohio*, have petitioned the legislature to appropriate funds in aid of paying the expenses of a *State Agricultural Fair* to be held in that State next fall.

These movements indicate the gratifying fact, that agriculturists begin to feel that they have rights, and are determined to maintain them. The *ball* has commenced, and will move onward, until it shall have attained its object—justice to agricultural interests.

Extract of the letter from a gentleman of Danville, Va., to the Editor of the American Farmer:

"*Dear Sir:*—Enclosed are five dollars with the names of five new subscribers. I am delighted with your paper, and shall continue to try and extend its circulation, under the belief that in so doing I shall confer a favor on all whom I induce to subscribe, and do something to advance the great cause of agriculture in this portion of country. There is much prejudice existing amongst the farmers of this immediate country against what is termed "book-farming." He that will work hard, say they, has no need of "a book" on farming. It is surprising to hear such nonsensical balderdash from men of whom better things might be expected. I was told yesterday by a gentleman of great wealth, and who, on general subjects, has a good stock of information, that he believed the reading agricultural papers had cost a son of his some thousand or more dollars at least, and that he had advised him to leave off reading the "things" and pursue the example set by himself and his grandfather. Is it to be wondered at that we are behind the age here, that our fields are grown up in broom sedge and old field pines, interspersed with gullies innumerable, when men of influence will talk thus? I will drop the subject for fear you might be led to believe worse of us than we deserve, as bad as we are. The prize essays of Mr. Stabler "on the renovation of worn-out lands" and "draining," deverve to be printed in letters of gold, and placed—were such a thing possible—where every agriculturist in the land could read them. His mode of constructing under-drains is entirely new to me, but reason and observation tell me it is *the mode*. I have often ob-

served that when, in cutting a ditch, a vein of small rock and sand is crossed, the water pours in through it, but it never occurred to me why it did it or where it came from. Mr. Stabler has explained all—his plan has two of the highest recommendations possible for any to have, viz: cheapness and everlasting durability. Pebbles are abundant with us and cost nothing beyond transportation, whilst wood and brick are worth something more than "the hauling." The cost of transportation compels us to deny ourselves the use of lime—the sheet anchor of treatment for poverty in soil—Guano and other manures not procurable in this immediate country. We use Gypsum to a small extent only—I intend giving it a fair trial on corn and tobacco this year. My tobacco lots, on which I will use it, are now being covered with stable manure, wheat straw, leaves and litter of every kind procurable. My field for corn is land, cleared five or six years since, in good heart and well covered with trash, &c. We are looking forward with many pleasing anticipations to the time when the Richmond and Danville rail-road will enable us to use them ad libitum, at least those of us who are not ruined before that time."

VIRGINIA.—The spirit of improvement which is abroad in Maryland, has also reached our neighbors on the right hand, and on the left. We are daily receiving additions to our subscription list from other States, and the most flattering accounts of the high esteem in which our journal is held wherever it has gained a foot hold. From a new subscriber, we received the following note:

"I enclose the amount for your paper, the numbers of which from July I received to day. I am highly pleased with it, and shall endeavor to prove it to you in a more substantial way by the commencement of its next year. We greatly need a paper of the kind in this backwoods country, where tobacco and corn, corn and tobacco, are the only crops thought worthy the attention of the planter—and Guano, plaster, lime and poudrette looked upon as manures of "Yankee inventions," and only fit to render the farmer or planter, who buys them, a subject for the poor house. The magnificent landscape, which presents itself on every side, of worn-out fields grown up in broom sedge, beautifully variegated with innumerable gullies and dwarfy old field pines must have the effect, ere long, to bring our deluded farmers to their senses, and teach them what they should long ago have learned, that the tobacco is the most ruinous crop we grow, and if continued to be cultivated hereafter as it has been heretofore, will render our country a howling wilderness and a delightful retreat for owls and such birds as are fond of desolate places."

Mr. Wm. Cairns, a farmer in Essex county, New Jersey, writing to his brother in this city, says:—"I duly received the American Farmer—it is an excellent paper. In an article on bone manure, I followed the directions for the use of it, and I never saw such a crop grow. I used bones very extensively on all my crops last summer. I put in about 5 acres buckwheat, and applied 20 bushels of bones, which cost here $10. I had 100 bushels, which is worth here $1 per bushel—so I give the American Farmer credit for putting $100 in my pocket. All my neighbors' crops of buckwheat failed, and where I did not apply the bones, mine also failed. I have an uncommon good crop of corn from the same course."

ASTONISHING YIELD OF CORN.

RACCOON FORD, Culpepper County, Va.
January 15th, 1849.

To the Editor of the American Farmer.

SIR:—I have been a subscriber myself to your valuable paper for 12 months past, and can in truth say that I have never expended a dollar which brought me as much pleasure and profit. There seems to be a laudable spirit of emulation abroad in your State in reference to agriculture, which I should rejoice to see awakened in ours. 'Tis true we are improving considerably in our management and improvement of our soil, but I think we are far behind our neighbor, Maryland; judging from the accounts I see in the "Farmer."

We have a soil here susceptible of the highest state of improvement, and all that is wanting is light upon the subject.

Had I time I would give you an account of a most extraordinary corn crop raised in this vicinity, which was accurately surveyed and measured; a crop that would do credit to the richest soils of any of the new States. I may hereafter give you a statement showing the product per acre, the mode of cultivation, and all the particulars of this crop. I will only say now that an acre, measured as above, yielded 28 barrels, (twenty-eight) 3 bushels, and seven gallons. This was raised by Dr. George Morton, of Slate Hill, on the Rapid Ann river, in this county.

But I only intended when I commenced to send you a new subscriber—when I have more leisure I may write more at length.

In great haste, your friend and ob't servt.,
P. P. NALLE, P. M.

We should be very much gratified if our friend N. would give us a full description of the soil, its mode of preparation, laying off, manuring, and culture of Dr. Morton's extraordinary crop of corn. Such products are rare, but go to prove that much more corn than is, can be raised on an acre of ground, and in that respect would serve to stimulate others in efforts to increase their own.—*Editor Am. Far.*

Extract of a letter from Caroline County, Va., to the Editor of the American Farmer:

"I could not have imagined I should have been so much pleased with your journal. It seems to be conducted with spirit and great ability; it is calculated to keep up great interest and enquiry upon the subject of agriculture, &c. I did not know that old Maryland was so alive upon the subject—her sister Virginia seems almost asleep; I hope your paper will be the means of awakening her. I am delighted with Mr. Stabler's prize essay. I have been trying to improve my lands for more than 20 years, but the greater part of the time I was laboring in the dark. I have tried lime in a small way two or three times, and have never seen any decided benefit unless mixed with manure. I find from reading your paper, it was not judiciously applied."

RENOVATION.—A correspondent in the District of Columbia, writes us as follows:

"I am trying to renovate an old worn-out farm of 300 acres on Seneca creek, in almost a square body, and composed principally of red sandstone (Smithsonian) land. The farm has had a *rotation* of corn and *oats* for 50 years, or more. I obtained it a year ago—and people say, they would not have known it."

AGRICULTURAL CONVENTION OF DEL.

MEASURE OF THE LIME BUSHEL—PRICE OF GUANO—CATTLE ON THE HIGHWAYS.

We are indebted to some friend for a copy of the proceedings of the Agricultural Convention of the State of Delaware, which met at *Dover*, on the 17th January last. We shall give an abstract of the resolutions adopted with the more pleasure, as the subjects to which they relate are of interest to farmers and planters, generally.

The first series of resolutions allude to the LIME TRADE. The preamble states the estimated consumption of lime by the farmers of Delaware, to be something like a million of bushels, annually, and that although the laws of Pennsylvania prescribe the size and dimensions of the lime bushel, whence most of the lime comes to Delaware, that this large business is conducted without a sealed measure—each vender using a measure of such size, shape and dimensions as he may procure to be made by a cooper, without the sanctity of a seal; and concludes that the farmer should be protected by a regular standard measure. By the first resolution, the legislature is desired to pass a law at its present session, adopting the size and dimensions of the lime bushel of Pennsylvania, as the measure that shall govern all contracts within the State of Delaware, for lime, viz: a measure 13¼ inches diameter in the bottom in the clear, 15 inches diameter at the top in the clear, and 13 47-100ths perpendicular in depth in the clear, and that each measure shall be authenticated by the usual seal.

The second resolution recommends to farmers the expediency of requiring their lime to be measured to them by the bushel measure, instead of by the wheelbarrow load.

The third resolution recommends *lime burners* to be their own carriers.

The fourth and fifth resolutions, in order to promote justice between the buyers and sellers of lime, declare it to be the intention of the convention to appoint a committee to confer with a similar committee to be appointed by the lime-burners. The committee on the part of the Convention consists of Messrs. Bryan Jackson, Barney Reybold, Robert Palmitory, John Frazier, William Ross, and Peter N. Rust.

The second series of resolutions relate to the purchase of GUANO. The preamble holds Guano to be a valuable fertilizer, and that it pays well when judiciously applied, and bought at reasonable prices; but states that speculators demand enormous advances beyond the importers' price, amounting to 30, 40, 50, and even as high as 75 or 100 per cent. and states, also, as a fact, that the legal ton of 2240 lbs., so far as Guano is concerned, has been altered by the Board of Trade, to 2000 lbs. The resolution following, recommends farmers to club together, and through one of their number, or other agent, to purchase at first hands the quantity they all may require, and names Messrs. *Alford Barrett & Co.*, No. 45 New York, and Messrs. *Minor, Lawrence & Co.*, of New London, Connecticut, as persons who may be addressed upon the subject of purchases—the first has agreed to act as an agent, while the latter house are importers of the article.

The last series of resolutions recommend a memorial to the legislature to pass a law restraining cattle from running at large on the public highways.

These proceedings are of general interest to the farming community, and embrace subjects which come home to most all. That there should be a standard measure by which lime should be bought and sold, every one will admit—that the advances charged on the cost of importing Guano, are frequently exorbitant, is equally true, and that cattle running on the highways, is as manifestly wrong as injurious, no one will deny.

ON THE BEST MODE TO PREVENT INJURY TO AGRICULTURE BY BIRDS, INSECTS, &c.

To the Editor of the American Farmer.

In a former number of the American Farmer, you solicit essays on the best means of preventing injury to agriculture by birds, insects, &c. I now state my observation and experience.

When I retired from the profession of law, and agriculture became my occupation, I soon found the pernicious influence on the corn crop, by birds, insects and worms. It was recommended to me to steep my seed corn in dissolved tar, as a protection against birds; from which I derived but little benefit. After this failure, having a barrel of gas tar, which I had purchased for a different purpose, and finding the smell very nauseous, I concluded the taste was equally obnoxious. For experiment I soaked my seed corn in it, and rolled it in gypsum; and I soon found it to be a condiment, which neither crows or black birds relished; and for some years past, I have used it with perfect success. My corn had also occasionally suffered much in its early vegetation, from the worm and the ant; since this application was made, I have suffered but little injury. In this the experience of my son, who resides on an adjoining farm concurs. Last year I flushed a clover field, and planted on the sod, and sustained no injury. An opinion prevails now that corn planted on clover is particularly subject to injury from worms. Some days after my corn soaked in gas tar is planted, the smell remains strong. I have another proof that gas tar is offensive to insects: formerly my grapes were much injured by rose bugs: for the two last years so soon as they appear, I immersed shingles in gas tar, and hung them in the vines, repeating it every two or three days, until the flight is over, and have found that the rose bugs avoid the vines.

I have no experience in the Tobacco crop, but remember in my youth, that armies of turkeys were sent into the tobacco grounds to destroy the worms. I have thought it worth the experiment, for planters to saturate strips of plank in gas tar, and to stick them through their grounds, and to apply the gas tar every two or three days. Tobacco was formerly cultivated on the Eastern Shore, to a large ex-

tent; it has for many years been abandoned—it required a large force of labor, and contributed much to impoverish our country.

In my early recollection, when wheat was sown from the 25th of August to the 20th of September, if the weather was dry and warm, much injury was done by the grass-hopper; it did not destroy the stems like the Hessian fly, but preyed upon the blade, and diminished its growth, and to a certain degree, lessened its power to withstand the heavy frosts of winter—it is very sensitive to cold, and disappears in the first cool weather in September. Under our habit of late sowing it now does little injury.

The insects now injurious to the wheat crop, are the weevil fly, the black weevil, and the Hessian fly. The weevil fly deposites its egg in the grain soon after it comes into head, and does not mature till some time after the wheat is cut. If the wheat be threshed before the 15th of August, and thrown into bulk, the egg perishes, and no injury ensues; but if suffered to remain long in the shock or stack, the egg hatches to the great damage of the grain. This insect is little known sixty miles to the North of us, and after a severe winter, it often disappears for several years.

The black weevil is a bug generated in our granaries, particularly in those which are old; my wheat for several years was damaged by them, but by smoking my granaries regularly once in the year with sulphur, closing doors and windows, they disappear.

The great scourge to our agriculture is the Hessian Fly. There has been much speculation as to its origin, but no satisfactory account has been given. It appeared first to the North, soon after the Revolutionary war, and pursued its course by a slow march to the South and West. Its principal influence was not experienced till about the year 1798 in this region.

This pernicious insect, it is probable, is fastened upon our agriculture, so long as we continue to grow wheat, but I think experience has proved, that its evils may be mitigated. Soon after its appearance it was perceived that the latest sown wheat suffered least. I entertain the opinion that after the Hessian fly comes out in the warm weather of spring, it continues to procreate till the cool weather in autumn. I fear they hold their vitality longer than most insects except the musquitoes of Baltimore, which sometimes keep their position till the month of November.

I think after the weather becomes cool in October, particularly after a slight frost, wheat may be sown without much fear of being attacked in the fall. I have no recollection of injury being sustained from the fly, when sown after the cool weather commences. It ought to be sown then with great expedition, so as to give the root strong hold on the ground to grow off early in the spring. If the month of March be cool, and the wheat strong, it will resist the fly which comes out in April. I have seen wheat in the same field, where the land was rich, resist the spring fly, when the poor parts of the field were greatly damaged. In the years 1817 and 1836, there was a general failure of the wheat crop, from the spring fly. In both of these years, there was a burst of warm weather early in March, which continued for many days. The thermometer approaching to summer heat, which brought out the fly, before the wheat had grown to resist it. I hold that if the month of March be cool, and the wheat gets some growth, it defies the fly.

In addition to my own experience, I refer to that of observant farmers, who have sown wheat, in the same field, part of it rich and part poor, that the former has sustained no injury, and the latter not seriously damaged by the spring fly.

In opposition to the theory I have advanced, is that in many parts of the Eastern Shore, wheat was sown in 1846 and in 1847, in August and September, with success. To which I answer, that for causes not ascertained, mischievous insects sometimes disappear for one or more seasons, and then return; and I understand that in the early sown wheat of last fall, the injury by the Hessian fly is very apparent. I did not begin till the 8th of October; there had then occurred a slight frost, and the weather was hot afterwards, and I saw no marks of the fly.

I am sensible that some of the facts and circumstances here contained, I have before stated, in the American Farmer. I deemed it proper to give you a full statement, though I may be justly charged with repetition. WM. CARMICHAEL.

Wye, Queen Ann's Co., Md., Feb. 10, 1849.

IMPROVEMENTS IN TALBOT COUNTY.

We have received from an unknown correspondent, the following communication, post marked as dated. The writer will observe that we have omitted a portion of his remarks, for reasons which upon reflection must be obvious to him. We thank him for his kind tender of services on his return to the sunny South, and for his complimentary notices of our journal.

To the Editor of the American Farmer.

SIR:—Allow a stranger, but at the same time an enthusiastic admirer of the noble cause so ably advocated by your *model* paper, to say a few words of congratulation to yourself and readers.

Maryland is my native State, but for the last fourteen years I have been a citizen of the West and South West. A few weeks since I arrived here on a visit to my relations; and feeling a great interest in the improvement of the lands of *Talbot* county, has been the cause of my making the closest observation, and instituting comparisons of the extraordinary fertile state of many farms, which were at the time of my leaving here, *mere sandy deserts.*

On all sides, (with the exception of some few stubborn "*anti-book*" proprietors) the work has been nobly carried on, and the sure consequence has, as a matter of course, followed in the possession of RICH FARMS, BLOODED CATTLE, with a corresponding ENTERPRISE, INDUSTRY, and HAPPINESS.

In common with all persons of observation acquainted with this county, I have always considered it as the best situated body of land for agricultural purposes, I have ever known. By looking on the map of the State, this will at once become evident to the most superficial observer. Here are congregated together every advantage. The farmer who has not a source of decomposed shells, as many have upon their lands, is in but few instances so far removed from navigable waters as to make it inconvenient or expensive to procure the *bought manures*, provided he has *the enterprise* and *faith* to thus invest his surplus means. All these advantages, with many others, are acknowledged even by the most inveterate grumbler or keen seeking fault-finder. Here too, the sportsman can enjoy *hunting* and *fishing* to the greatest extent, while the "*bon vivant*" revels in the most choice luxuries of land and sea.

Truly has Providence blessed with a bountiful hand the Eastern Shore of Maryland.

The first sensation upon observing the great improvement that had been accomplished over the broad lands of this county was SURPRISE, mingled with ADMIRATION. The next thing with me was to enquire into the cause of the great change which it was so evident had "come over the spirit of the dreams" of my old friends; for this CAUSE it was not necessary that I should long be on the search, AGRICULTURAL SOCIETIES and AGRICULTURAL PAPERS have been the instruments of the glorious change—a change evident to all, but more particularly to one like myself who had been absent for several years. It is useless for me in this article to endeavor to describe to you the poor state of many farms at the time I left this county, and their great improvement at present, for it is evident that you must be aware of all the facts that could be presented.

Some few days since, whilst on a visit to one of my acquaintances, (an enterprising and highly educated farmer) my attention was directed to your excellent work "THE AMERICAN FARMER;" my friend was extravagant as I thought in its praise, and in order to judge for myself of its quality, and as the French say, "*Pour en passer le temp*,"—I borrowed from him the 3d volume of your work. Never, my dear sir, was a loan so greatly enjoyed, its valuable matter was a feast to my mind, for although not engaged at present in any branch of agriculture, I have long studied the noble science. So thoroughly has your work convinced me of the great advantages and susceptibility of the lands of this shore to improvement, that I have determined that as soon as my business in the south can be settled, to remove back to this shore, and once more make my home in the "land of my fathers;" for, all things considered, one can do much better here under *present circumstances* than in the south or west; and so far from your pictures being overdone, I sincerely believe that with CAPITAL, ENTERPRIZE and INDUSTRY, that even more can be effected, than has as yet been performed.

I cannot close this hasty and certainly imperfect article, without adding my meed of humble praise to several interesting and intelligent contributors, from whose writings I have enjoyed the highest gratification, and for which I feel the most grateful. It is almost unnecessary for me to inform you that Col *Capron*, "*The Learner*," *Stabler*, "*Patuxent Planter*," &c. are the gentlemen here alluded to. May a beneficent Providence bless all their undertakings in this world, as they will certainly be blessed in the next, for their generous exertions for the good of their fellow beings in this.

On my return to the south, where my situation and circumstances will enable me to be of some benefit to your work, I shall take great pleasure in extending its circulation, which will be to your gain, and certainly benefit those who may become its readers; for my part I know of no way in which I can become more useful to my friends and the public generally.

Now sir, allow me in conclusion, to apologize for this communication; it gives no *theories* or *improvements* that your readers can take advantage of, it only has the merit of wishing the agricultural interests of my native State GOD SPEED.

I am, dear sir, with respect, your ob't serv't,

E. F. R.

Trappe, Talbot Co., Md., Jan. 13, 1849.

We refer to the advertisement of Messrs. Hayden & Coale, for the sale of Bone Dust.

LIME FOR AGRICULTURAL PURPOSES.

To the Editor of the American Farmer.

SIR:—In your number for the present month, (January,) you have a valuable article explaining the relative value of shell and stone lime.

It appears that specimens of stone-lime, No. 2, No. 8, and No 10, contain each 18 parts magnesia in a hundred.

Now will you be good enough to answer the following questions, viz:

Is magnesia injurious to the soil, and why? If injurious, to what kind of soil is it most injurious?

From what particular locality did Nos. 2, 8, and 10, containing the magnesia, come?

Were these specimens, or either of them, taken from that part of Baltimore county from whence Messrs. E. J. Cooper, Griscome & Burroughs, and Robinson, get their supply of lime?

Does any gentleman, or any friend, engaged in lime burning in Baltimore for agricultural purposes, get their limestone from the same source from whence specimens Nos. 2, 8, and 10 were taken?

Have you a knowledge of the quality of the lime that is usually sold in Baltimore to Eastern Shore farmers?

If you have this knowledge will you be good enough to explain and inform farmers what kind of lime they are purchasing?

I have taken great liberty in propounding these questions; but if you could see the quantity of stone lime that is brought from Baltimore, and applied to lands on the Eastern Shore, and could also know our extreme ignorance in regard to the quality of the article, you would not be at all surprised at our anxiety to have correct information on the subject.

MANY FARMERS OF THE EASTERN SHORE.

January 22, 1849.

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Replies by the Editor of the American Farmer.

1. To the first question, we answer—the *theory* of most writers upon the subject of lime, as applied to agricultural purposes, is, that what is technically termed *magnesian lime, is injurious*, and the reason assigned, is, that magnesian lime, when burnt, having *less affinity* for carbonic acid gas, than pure *lime*, remains *caustic* longer, and from its causticity exerts a baleful influence upon vegetation. We confess, however, that we have not the same *dread* of magnesian lime as some have, as however much slower it may imbibe carbonic acid gas, than what is termed *pure lime*, it will, in time, assume the carbonate condition, when it is inoperative for purposes of evil. The objection against it is, too, very easily removed, by simply applying a less quantity—one-third less magnesian lime than pure lime will answer. Why should magnesia be such a bugbear? Almost every species of trees, grain, and vegetable productions, contain more or less of it, and the inference is, that it is necessary to their physical integrity, or it would not be found among their constituent elements. In the grain of wheat there are 15.9 per cent.—in its straw 5 per cent. We do not entertain the slightest fears of any bad result from a judicious dressing of magnesian lime, though, if we were purchasing, we should prefer the *pure* lime.

Magnesian lime is applicable to the same description of soils as is any other lime.

2. We have no knowledge from what particular locality the specimens Nos. 2, 8, and 10 came. We took the table from professor Ducatel's report, made to Gov. James Thomas, December, 1835.

3. We have no personal knowledge from what part of Baltimore county Mr. Cooper obtains his lime; nor have we any with regard to where any other of the dealers obtain theirs: as yet we have never heard that any of the lime formations in Baltimore county contained much magnesia.

As the State Chemist is now on the Eastern Shore, it would be a prudent thing to get him to analyze the lime sold on that shore for agricultural purposes. We are certain that that efficient and skilful gentleman would take pleasure, if requested, in making the analyses.

5. The lime used in many of the counties of England for agricultural purposes, is *Magnesian Lime*, so, also, is that used in those parts of Pennsylvania bordering on the Schuylkill river; and we believe, that a large portion of that used in the State of Delaware is from the same locality, as well as some in a few of the upper counties of the Eastern Shore of our own State. As we have stated, we should always give the preference to pure lime in our own purchases, where we had the option of an election. We have not, as we have before premised, however, any dread of serious evils resulting from applying magnesian lime, in moderate quantities; for although it has less affinity for carbonic acid gas than pure lime, and is, consequently, longer in becoming a carbonate, if regard be paid to quantity, in applying it, it cannot operate disadvantageously. In its *effete* state, it is just as harmless as any other variety.

As it remains longer in a *caustic* state, it is possible that for a time, it may prove more exhausting, by more rapidly exciting the organic matter it may find in the soil into a state of decomposition, than would *pure* lime, whose greater affinity for carbonic acid gas would much earlier convert it into a carbonate; but this inconvenience may be obviated by decreasing the quantity applied about one-third.

Those of our friends on the Eastern Shore, who have deposites of *shell* and other *marl* on their estates, need not go abroad in search of *lime*, as in those deposites they may find the calcareous principle which gives to that mineral its value.

A correspondent at Washington, asks: "Can you inform me whether ashes, slacked or dry, would injure vitriolized bone or night soil, if mixed with them as a drier?"

The vitriolizing of "*bone* or night soil" would act as a fixer, and prevent the ashes from driving off the nitrogen, and, therefore, the editor of the American Farmer would not fear any injury that could ensue from the combination of ashes with either substance.

ORCHARDS—TIMOTHY

To the Editor of the American Farmer.

SIR:—Ever zealous in advocating the cause of agricultural pursuits, and being anxious to gain the necessary information from so creditable a source as through your valuable paper. I would be much indebted to you to answer the following questions in your February number, if possible: 1st, Whether it would be most advisable to work an orchard in row culture after liming it, or lime it in the spring after ploughing it, and suffer it to remain in fallow until the fall, and then put it in wheat (it is a stiff clay well adapted to wheat, and thin at that.) I see you recommend (under the head of deterioration and renovation of orchards) in your June number of 1848, that they should be worked in row culture if possible, and if they cannot be limed entirely, you recommend putting lime around the tree. Would not working the orchard to and fro during the summer unite the lime with the soil and be less subject to exhaust the soil? The orchard I allude to has not been worked for four years. My second question is whether timothy will mature in time for a crop if sown in February or March, and how much to the acre, and how the land ought to be prepared? Some of the land I wish to put in timothy was in potatoes this last fall, and is rich and strong.

Very respectfully, your ob't servant,
GEORGE A. DIGGES.

Greenhill, near Bladensburg, Md., Jan. 16, 1849.

Replies by the Editor of the American Farmer.

1. We certainly would not recommend *wheat* as a substitute for corn, or any other crop cultivated in rows, in an orchard. The reason of our recommending *row culture*, was, because, to such crops manure is freely bestowed, our object being to secure a good dressing to the trees, in a way that would repay the culturist for his manure and labor of applying it.

2. The application of lime after ploughing for a row crop, would answer well—so would it also answer, to *fallow, lime and permit it to remain until the fall;* but as the land is "*thin*," we doubt the propriety of "*putting it in wheat*," unless a dressing of some sort of nutritive manure should be given to the soil, for the crop of wheat would only serve to make the soil *thinner*, and thus rob the trees of their food.

3. Liming a *poor* soil in which an orchard may be planted, is good, so far as it may go, but lime *alone*, will never make such a soil rich. Though lime is an excellent ingredient in a compost, it is not, of itself, sufficient to renovate a worn-out soil. A *compost* formed of 20 double horse cart loads of marsh mud, and 50 bushels of lime, per acre, would, after being permitted to stand in pie a month or so, be an excellent application for land in the condition of that of our correspondent's orchard.

4. Stirring his soil, after liming, as proposed by our correspondent, would be productive of good, by incorporating the lime with the earth and bringing on the decomposition of inert fibrous matter therein.

5. Timothy, if sown in *strong, fertile* land, *so soon* as the frost is out of the ground, would mature a crop. It would however be later than if it had been

sown last August, the time when it ought to have been seeded. The ground should be carefully ploughed, and thoroughly pulverized by the harrow, so as to make a fine tilth—then sow a *peck* of timothy seed per acre, lightly harrow it in, and then roll.—We wish to be understood distinctly as regards the time of sowing—the moment that the soil is sufficiently relieved from the frost to be susceptible of being put into first rate order, is the time the seed should be sown—delay of two weeks might prevent the grass from maturing a crop. We wish, also, to be understood as expressing the belief that it is a waste of labor to put *poor* land in timothy without heavily manuring it. This will appear self-evident to our correspondent when he reflects that timothy when set is intended to last from 5 to 7 years, and not only delights in a *fertile* soil, but will *not* yield a crop in an impoverished one. It is a productive grass when well fed.

CHARRING FENCE POSTS.

To the Editor of the American Farmer.

Sir:—It is frequently recommended in your valuable paper, to char fence posts, yet I have seen no directions for the operation.

It may lessen the labor much, and having had some experience in charring upwards of 200 posts, I will endeavor to give some hints, hoping they may prove useful.

Having placed a green log, 9 to 12 inches in diameter, and 10 to 15 feet in length, upon the ground, (or a less one, with the upper side elevated to 9 to 12 inches,) put any light kind of dry wood, as chestnut, sassafras, poplar, or pine, split small, (or small branches) along the log to the width you wish to char upon the post, say 18 inches, piling it nearly to the top of the log. Then arrange the posts by placing them with the first mortice on the log, and the root over the light wood, and about one inch apart—the top being elevated to a level position, till you cover all the log—cover this layer of posts with light chips, or chestnut bark, to the depth of 4 or 5 inches, to the width of the wood below—now fix a green pole 5 or 6 inches in diameter, over the under log, so as to put another layer of posts upon it, and follow the same routine until you have raised your pile as high as you like, being careful to put some extra bark, or light wood up the side of the pile, so as to insure the charring of the outside ones.

Fire the under light wood, and watch to see that your posts do not char too much; a little experience will determine the quantity of wood, and bark, or chips, so the right quantity may always be deposited.

Harford County, Md. R. S. H.

ON THE USE OF CHARCOAL.

To the Editor of the American Farmer.

Sir:—According to analysis, charcoal (carbon) forms the chief ingredient of all plants, and it possesses the greatest affinity for ammonia, absorbing some ninety times its volume of that precious but volatile gas. This last property would seem to be sufficient to make it a valuable manure, enabling it to extract from the atmosphere, the dews, rains and snow, a vast quantity of vegetable food.

I have seen accounts of its occasional use in this country, but have never heard any well authenticated facts as to its value.

In England, I do not know that it is ever used, while in France, it is said to be a common and excellent manure.

We have in Maryland, upon our old lands, much timber that is of little value, that will not pay for taking it to market—if this could be converted into manure by making charcoal of it, it would enable many a farmer, who has not the means of purchasing manure, to improve his land—and I am persuaded you would confer a favor upon many subscribers by giving us such intelligence as you may have upon this subject.

I propose myself to make a trial of its effects, and should be much obliged to you for an answer to the following enquiries:

Is charcoal in common use as a manure anywhere in the United States, and if so, what quantity ought to be applied to an acre?

Is it not a valuable constituent of a compost of stable manure, earth, &c.

Yours, Mullen.

Harford County, Md., Feb. 8th, 1849.

Reply by the Editor of the American Farmer.

Charcoal, is not in common use in the United States as a manure, though it has been successfully used in the States of *New York*, *Ohio*, *Virginia*, and elsewhere. From 20 to 50 bushels to the acre, according to the quality of the soil, have been applied; the fertile requiring less than infertile soils. Its great power as an absorbent and condenser of gases, imparts to it much value, whether used as a top-dressing, or as an ingredient in composts.

We have from time to time published most of the experiments tried with charcoal that have come under our notice, and have written several articles explanatory of its action.

Should our correspondent carry his contemplated experiment into operation, we should feel obliged to him for a paper upon its results.

EFFECTS OF PLASTER, SALT, ASHES, &c.

West River, January 18, 1849.

To the Editor of the American Farmer.

Sir:—I avail myself through the medium of your valuable paper to make a few enquiries relative to our lands in this section of country.

We have been using plaster on our clover for a number of years past, and there is very little effect produced in comparison with former years. Would not a compound of salt and ashes have a better effect on our loamy soils? The former is a great attractor of moisture, and the latter might restore in some measure the energies of the soil lost by excessive stimulants or cropping.

Give us your views on this subject if you please, and state also what quantity of unleached ashes you would apply per acre, to *moderately rich* land, fallowed last fall, to be planted in the spring with potatoes and corn. Had the ashes better be applied as a top-dressing on the plants—or strewed over the sets after they are dropped in the furrow—or would it be better to broadcast the land before planting or laying off?

Any information or suggestions will be thankfully received by your Subscriber.

Replies by the Editor of the American Farmer.

The difference in the *effect* derived from applications of Plaster now, to what it was in former years, may arise from the fact that the soil may have been so frequently supplied with it as not to stand in need of more at present. If such be the fact, our correspondent's proposed dose of ashes and salt, would doubtless be serviceable—5 bushels of ashes and 2 of salt, per acre, would form an excellent compost for such purpose, and we doubt not would be fruitful of benefit. A still better compost we apprehend might be made, of 3 bushels of ashes, 2 of bone dust, and 1 of salt.

For *general* benefit to the soil the compost had better be sown broadcast, to be either harrowed or not harrowed in, as may best suit the convenience of our correspondent.

So far as the culture of the Potatoes may be concerned, we would sow the compost over the potato sets in the drill at the time of planting, and again over the plants so soon as they may come up, either before or at the time of their first being worked.

In England where the lands are conveniently located for such appliances, when lands become *plaster sick*, as the phrase is, they are treated to a dressing of gas-house lime, in the proportion of 10 bushels per acre, applied broadcast to the surface subsequently to being harrowed.

In addition to all these dressings, above all things, a full dressing with barn-yard, stable or compost manures, should at the commencement of every rotation be given to all soils in cultivation.

MANURING A POOR FIELD FOR CORN.

"A Subscriber" writes thus:

"I have recently bought a small farm, and desire to put in a 20 acre field of corn, but have no barn-yard or stable manure; what will be the cheapest and most effective *bought manure* for me to substitute. The soil is what may be termed a clayey-loam. It has been subjected to a system of impoverishing culture for many years, having been cropped annually, for about fifteen years by a tenant, who proceeded under the system which takes *all out*, and puts but little in. My object is, to so manure the lot or field as to ensure myself a fair crop of *wheat* next autumn, to be followed by clover. I have salt marsh and marl on my place. Now knowing the condition of my field, its resources, and my object, tell me how to proceed, so as to attain what I aim at."

Considering the objects which our correspondent has in view, and taking the resources which he has on his place into account, we know not how he can better realize his wishes, than by making a *compost* of his salt-marsh mud and marl, in proportion of 20 double-horse cart loads of the former to 300 bushels of the latter, thoroughly mixing the whole together, putting it in *pie* as soon as possible, and when the time arrives, to broadcast it over his land, and plough it in. If he were to mix at the rate of fifty bushels of *ashes*, or *ten* of bone-dust, per acre, he would greatly add to the efficacy of his compost, though, without the two latter, we believe he would find his soil essentially improved, and that his corn crop would prove a good one, provided he gives to each hill at the time of planting,—to give to the plants a *start*,—a handful of a mixture, composed of 10 parts woods'-mould, 5 parts ashes, and 1 of Plaster, as by the time the roots of the plants stretch beyond the hill, the general compost will have become competent to continue their growth healthfully. If, however, our correspondent designs to use *bought* manures, we know not how he can better attain his object, than by *broadcasting* 400 lbs. of Guano and one bushel of plaster on each acre of his field, and ploughing it in, as spread. This would not only ensure a good crop of corn, but put his soil in a condition to bear a regular rotation—or what we think would answer better, after ploughing in the guano and plaster, would be to broadcast 300 bushels of *marl*, per acre, over his field, and harrow it in. This would afford all the mineral and nutritive elements necessary to ensure permanent fertility.

TO DESTROY SASSAFRAS BUSHES.

The following plan for the destruction of Sassafras bushes, was elicited from Professor Hallowell, of Montgomery county, by the enquiries of a gentleman of the District of Columbia, who has forwarded it to us for publication in the American Farmer. In some parts of our state, the farmers are much pestered by these bushes, and the advice of Mr. Hallowell will no doubt be thankfully received by them.

* * * * The killing of sassafras bushes is a labor of no little difficulty—the mode most likely to succeed, and which in a dry season, seldom fails, is to keep them deprived of their leaves, for six weeks, or two months, during the hottest time of summer. The plan is based upon the well understood fact in vegetable physiology, that the leaves of grass, plants, and small bushes are re-furnished, when removed, by nutriment drawn from the roots; and, on the leaves being frequently removed in one season, the roots in constantly furnishing a new supply, become so exhausted as to perish, especially when the season is a dry one, as before remarked. In regard to sassafras, the success is said to be better, when they are not cut too near the ground, but the stalk left three or four feet high; and it is reasonable that this should be the case; as nature would then make an effort to throw out leaves at several different places, and thereby the roots would become exhausted more rapidly.

Hoping this may be satisfactory to thee, I remain thy sincere friend, BENJAMIN HALLOWELL.

CHAPPELL'S FERTILIZER, OR AGRICULTURAL SALTS.

The following evidences of the value of this fertilizer, which has attracted much attention of late, were intended for our last No., but being crowded out, are now presented to our readers. We learn that a number of our most eminent agriculturists, being well satisfied of its efficacy, have purchased

very largely of it this spring. The enquiries to us in regard to it, have been very numerous. We have no doubt that many of the farmers who have recently purchased, will give it a thorough trial, in comparison with other manures, and furnish us with the result of their experiments.

Extract of a Letter from DR. ALLEN THOMAS *to Messrs.* CHAPPELL, *dated,*

"DALTON, Elk Ridge, Md., *Aug.* 24, 1848.

"The *Agricultural Salts* I got of you *last fall* I applied to my *wheat.* I strew it, (as you would plaster,) about a barrel to the acre, and *harrowed* it in with the *wheat;* the crop was very large, and I think far superior to any crop I ever made—and all who saw it thought it quite equal to any they had seen. My neighbor, Dr. Stockett, top-dressed two-acres of his wheat last March, (using one barrel to the acre,) and he thinks these two acres yielded twice as much to the acre as the rest of the field. I have now gone more largely into the use of it, and should the crop be as good as it was this year, I shall be perfectly satisfied. My friends on the Ridge have gone largely into the use of it; and should the experiment be as satisfactory as mine, you will have, next year, large orders."

Dr. Thomas purchased ten barrels for his first, and seventy barrels for the second experiment—and late in the fall he writes us, "My wheat looks very fine, and bids fair to be a good crop." Dr. Thomas has since informed us that he got fully twenty-five bushels of wheat per acre in his first experiment; and the season being forward, the growth early in the spring being advanced, he put his sheep on the field of wheat early in February, and kept them on it until about the 10th of March.

Dr. Stockett says that he took fully eight bushels per acre of wheat, additional yield, where he applied the Salts. The land, when the first experiment of Dr. Thomas was made, was the poorest place on his farm. The result was so satisfactory and conclusive, that many of his neighbors purchased largely of the *Fertilizer*, for their crop of wheat. One gentleman took two hundred barrels, and several others one hundred barrels each. So far as we have heard the results, they are all well pleased with its effects; the *wheat*, where it has been used, looks very fine, and bids fair to give *large crops.*

Letter from C. R. TAYLOR, Esq., (Mr. Taylor's farm is about 9 miles on the Susquehanna Rail-Road,) *dated,*

"BALTIMORE, *Nov.* 1, 1848.

"I take pleasure in adding my testimony to the efficacy of your *Fertilizer* or *Agricultural Salts.* So far as I have tested it, I consider it as being *superior* to the *best Peruvian Guano*, which cost me $51 per ton. I have tried your Salts on *oats* and *clover;* on *corn*, *wheat*, and *timothy.* My manager considers it one of the most useful discoveries ever made to promote the growth of plants; in which opinion I fully concur. I applied it to a field, last spring, in which I put down oats and clover; the soil was more unpromising for a crop than any other part of my farm. On a part I used Peruvian Guano of the best quality; the other half of the field I used your Agricultural Salts; the growth and yield of the latter half was very fine, both of oats and clover, and much superior to the other part, where the guano was used.

"I also directed the 'Fertilzer' to be used on a five acre field of corn at the rate of three barrels to the acre, distributed broad-cast. On a part of the field I put on Guano, under the direction of a friend of experience in its use. In *this* experiment also, your Salts proved decidedly superior to the Guano. I did not measure the yield per acre; but the corn, both in quality and quantity was equal to my most sanguine expectations; the ears of corn were very large and every grain perfect.

"The lot of Salts I purchased from you in August last, I applied to a field of twenty acres, (about two barrels per acre.) which I set with *wheat* and *timothy;* its surprising effects are already visible—the wheat and timothy are very forward, looking remarkably well, and there is every indication of a large crop.

"I am not surprised to hear that the demand, during the seeding season this fall, has been greater than you could supply. I would advise you to have a good stock ready on hand for the spring crops, and for top-dressing on wheat—for all who have seen its effects will wish to avail themselves of its salutary results."

Testimony of FRANCIS VALDENAR, *of Montgomery Co., Md., Tobacco Inspector, Baltimore.*

"This is to certify, that I purchased forty barrels of *Chappell's Fertilizer or Agricultural Salts*, for my *wheat* crop this fall. I applied it at the rate of one and a half barrels to the acre; and judging from the present appearance of my wheat, it bids fair to give a large yield; its effects have fully realized my expectations, and the field on which it was used appears much more forward than an adjoining field where I used *guano.* There is no comparison between the two fields, that on which the *Fertilizer* was used appearing so much better than the field on which I put the *guano.*

"I directed a square to be left in the field where the Agricultural Salts were used, so that I might more effectually test the virtues of the Salts as a manure. The spot thus left is very perceptible, and can be seen at any distance.

"I have no hesitation in recommending the article, having now every confidence in its fertilizing qualities, and fully equal, if not superior to guano."

BALTIMORE, *Nov. 14th*, 1848.

FLORICULTURE.

Prepared for the American Farmer, by S. Feast, Florist.

WORK FOR APRIL.

Dahlias will now be among the principal objects of attention, especially where there is a good collection. The roots should be potted if not done before, and then forwarded, in order to get some early blooms. The main stock for planting out need not be started until May.

Verbenas will be pushing rapidly, and coming into full bloom—Repot and train the plants to neat trellises, except such as are intended for beds in the open ground.

Camellias will require plenty of water until they have completed their growth; syringe frequently over the foliage.

Tulips, Hyacinths and other spring bulbs, should be uncovered, (if not already done,) and the ground stirred in order to prepare them for blooming in May.

Hardy Annual and Biennial Flower Seeds may be sown any time this month. Those intended for blooming, where sown, as Mignonette, Larkspur, Candy tuft, Petunia, Nasturtium, &c. should be sown in patches, each sort separate.

Geraniums should receive plenty of water and air—fumigate when necessary.

Mignonette, Roses, Stocks, and other plants in pots, should be attended to regularly; give plenty of air and water, and if infested with green fly, fumigate with tobacco.

Tender Annuals should be sown in pots if not done before.

Paonias and Hardy Herbaceous plants of all kinds, may now be transplanted in safety.

Jacobian Lilies, Gladioluses and *Tuberoses* may now be planted in the open ground.

HORTICULTURAL.

WORK IN THE GARDEN.

In all soberness we say to every one who may desire to have a good garden, and to be distinguished for one of the greatest sources of comfort and luxury about the homestead, that to effectuate these objects, time must be availed of—that there is not a moment to spare, and *that nothing must be put off for to-morrow, which can be done to-day.* But, as the garden is the property of the female head of the family, we feel that it will receive every attention; for, in the generous aspirations of woman's heart—in the noble ambition which animates her, when good is to be achieved—the strongest guaranties are to be found that whatever she ought to do, will not only be done, but done well. Thus believing, we feel assured that our recommendations will be carried out with that singleness of purpose for which the sex has ever been distinguished.

Now, let us see what is to be done.

Setting out Cabbage Plants.—If you have cabbage plants of a size fit to be transplanted, seize the first occasion of a rain to have them set out. But, before your cabbage bed is dug up, see that your gardener has spread thereon a liberal dressing of rich manure; and while he may be digging, see that he takes small slices with his spade, and sinks it to its full depth in the ground; make him rake thoroughly, as he progresses with the work, in order that he may never have to tread on the turned up ground while he is raking. The bed being thus prepared, let the gardener carefully draw the plants from the plant bed, and immerse them in a basin or piggin in which there is a mixtnre of *soot* and *flour of sulphur*, made, in the proportion of 3 parts of the former to 1 of the latter, into a substance of the consistence of cream. Into this sink the roots of the plants up to the first series of leaves, before planting them. This will not only protect them from the cut-worm and other insects, but serve to facilitate their early growth, thus serving a double good purpose.

Sowing Cabbage Seed.—If it has been your misfortune not to have done so before, without delay prepare a bed on your border and sow cabbage seeds of two or three of the earliest and later kinds. In the selection of the sorts, see that they are such as that one kind comes into use some days after the other, in order that your supply may be continuous.

Sowing Cauliflower Seed.—Sow cauliflower seed now, and they will be fit for use in October.

Brussels' Sprouts.—Prepare a bed and sow Brussels' sprouts seed therein, to afford a supply of sprouts when those of the cabbage and other early greens are gone. If your bed be prepared as we advised last month, it will afford you ample supplies for, at least a month after they first become fit for use.

Broccoli Seed should be sown early.

Peas.—Continue through this month, at intervals of a week, to drill in a few rows of peas, in order that your table may have a prolonged supply of this delicate vegetable.

Beans.—Prepare a bed and plant.

Spinach.—You should, early this month, sow a small compartment of Savoy spinach. When the plants are about 3 inches high, thin them out so as to stand about 4 inches apart; keep them clean of weeds, and you may rely upon having a good product of this delicious vegetable, provided you take the precaution to give it manure.

Carrots, Parsnips, Beets.—If you have not already drilled in a bed of these roots, do so without farther delay.

Celery.—Sow a small quantity of celery seed. If you have plants large enough, you may set them out.

Asparagus Beds.—If you did not do so last fall, go at once and have your asparagus bed cleaned; that done, have an inch or two of rotten manure forked in, being careful not to injure the necks of the plants; then rake and strew salt over the bed.

Should it be the case that you have no asparagus bed in your garden, sow seeds or buy plants, and make amends for the deficiency. No garden is complete without a bed of asparagus.

Strawberry Beds.—If you have not cleaned out and manured your strawberry beds, do so the first week in this month. Instead, however, of digging in manure, apply it in a liquid form. By placing horse dung in a hogshead, and filling it up with water, and giving your strawberry vines two or three good waterings with the decoction, you will greatly increase the size of the berries. And we wish you to bear in mind that, if the vines should be in bloom in dry weather, you should water them at least three times a week, taking care to hold the nozzle of the watering pot well down to the ground, so as to avoid washing the *farina* from the flowers of the plants. Before the vines come into bloom, they will be benefitted by being watered all over. Clean straw should always be laid between the rows, to protect the fruit from sand and grit, and maintain moisture in the earth.

Rhubarb.—You may either set out plants or sow seed: each should be done early in the month.

Salsify.—Early this month, if not done before, drill in a bed of this excellent root—the same preparation and culture as for beets.

Medicinal and Culinary Herbs.—All herbs of these descriptions may now be set out or the seeds sown—the sooner, the better. We wish to impress this truth upon you: No garden is complete in its arrangements that has not some of every kind growing therein.

Horse Radish.—Plant out a small bed of this root, if you have not one already; do it early.

Okra.—Drill in a small bed with okra seed. Their culture is the same as that of peas.

Red Peppers.—Any time after the 10th of this month you may sow your pepper seed.

Tomatoes and Egg Plants.—The seed of these excellent vegetables may still be sown; though it would have been better that they had been sown two months ago, in hot beds. Sow early, and be sure to prepare the beds on a warm border, and to manure them liberally and thoroughly, and pulverize them.

Lettuce.—If your plants are ready for transplanting, set them out the first good season. If you have none, without further delay sow some seed.

Radishes.—Sow small beds of these, at intervals of ten days, throughout the month.

Early Turnips.—Make a compost of 7 parts rotten dung, 1 part ashes, and, after digging up a loamy bed, full spade deep, and raking it well, spread on your compost, and dig it in half spade deep and rake it thoroughly; then sow *Early flat Dutch turnip seed*; rake that in and pat the earth down; then sow ashes over the bed. When the plants first come up, *sprinkle lime over them three or four mornings in succession,*

early; and when large enough, thin them out so as to stand 6 inches apart, cleaning out the weeds at the same time, and you may calculate on a good supply of early turnips.

Small Saladings, of all kinds, should be sown as early as possible this month.

Potatoes.—If not already done, plant a bed of the early kidney potatoes.

Onions.—You may either sow onion seed or set out bulbs.

Cucumbers, Squashes, Melons.—Towards the latter part of this month, these may be planted in open culture.

Raspberries, Gooseberries, Currants.—New plantations of these may still be made—the earlier, the better, taking care, in times of drought, to have them watered well and often.

Grape Vines may still be set out; so, also, may the cuttings.

Annual and Biennial Flower Seeds should be sown without delay.

Rose Bushes, Lilacs, Snow Balls, Honeysuckles, and all other flower shrubs and vines, should be planted out as soon this month as possible.

Hardy Evergreens will do well if set out early this month and attended to by being watered in dry weather.

Artichokes.—Dress your artichokes; but if you have none growing in your garden, sow some seed.

Nasturtium seed should be sown at once.

Transplanting Fruit Trees.—Any fruit trees that are not in leaf may be planted the first few days of this month. Trees planted this late, should be watered repeatedly, and will be the better of being protected by an application of litter of some kind, spread on the surface.

Pruning.—Any dead or other limbs that need it, should be cut off the first week in this month.

In the hope that every garden attached to a homestead in our land may be a *pattern* to its neighborhood, we shall conclude by the expression of the sincere wish that the labors of the year may be crowned with success, and health, happiness and prosperity abound throughout our land.

ON THE CULTURE OF TOMATOES.

"Quare Agite, O proprios generatim discite cultus,
Agricolæ, fructusque feros mollite colendo."—*Virgil.*

"Then let the learned *Gard'ner* mark with care
The kind of stocks, and what those stocks will bear—
Explore the nature of each several tree,
And, known, improve with artful industry."

HARMONY, Kent Co., Feb. 17, 1849.

To the Editor of the American Farmer.

SIR:—Allow me thro' the medium of your valuable paper to suggest a few remarks to your readers, especially to those who cultivate and desire to have (and who does not?) good Tomatoes. As the period of applying the few remarks I have to make, is fast approaching, you will do me a favor by giving this a place in the "March" number, should you deem it worthy.

My experience during the last three years has satisfied me of the advantage of my plan of cultivation, and not having seen it practiced by others, nor even alluded to by the press, I offer it to you, either for your own use or that of your readers.

Now for work:—As soon as I can have my plants in the Spring without incurring much risk in the event of frosts, I plant them out in a *good* soil, from three to four feet apart, taking care that he location I select, enjoys free air and sun-shine. As soon as the lateral branches shoot out, I cut them off, leaving the leaf which is formed at the joint until the plant is from *twelve* to *eighteen inches* high. I then continue the pruning with less caution, leaving only one—the main—stalk. By continuing this operation and leaving a sufficiency of *leaves* to digest the oxygen of the atmosphere, the plant becomes, not unfrequently, double, and sometimes treble, the usual size; the roots extend by not working the ground too deep, so that the plants are by a little assistance, capable of supporting themselves against the winds which invariably prostrate them, in other cases, even before the fruit is formed.

When the plant has attained the height of about two feet, I stick three or four pea-sticks around it, and as soon as the fruit begins to form, or the growth of the plant demands, I place some crotches, about four feet high, some six to eight feet apart, in a range with, and on each side of the row of plants, and on these crotches I place poles, and the work is done. By this arrangement the nutriment required for the formation of the numerous shoots which I cut off is directed to *one,* and this being thus forced produces fruit at least ten to fifteen days earlier than if left to grow *wild.* In addition to this, the stalk attains such a size as to be able to support itself with the assistance before suggested of the poles, &c. and the air and sun being thus permitted to pass freely through the vines, the fruit is more perfect, more easily obtained—as you can see such as are ripe at a glance—and the regularity and neatness of an impervious wall of the peculiarly deep green of the tomato plant, studded with glowing rich, red, ripe tomatoes, before your neighbor has "thought of making garden" is a sight, to say nothing of the taste, worth the trouble of having them all.

KEPOUROS.

SOWING GRASS AND CLOVER SEED.

To the Editor of the American Farmer.

SIR:—In Downing's Horticulturist, vol. 1, for 1846, page 303, in a chapter on "Lawns," the Editor says:

"The proportion should be about three-fourths Red Top to one-fourth White Clover. The seed should be perfectly clean: then sow *four bushels* of it *to the acre;* not a pint less as you hope to walk upon velvet."

I wish to ask you, Mr. Editor, if it can be possible that such a quantity as *four bushels* to the acre, can be intended—and yet Mr. Downing speaks very emphatically upon the subject. Please give us your opinion on the subject in your April No. as I am about laying off a lawn around my dwelling. H.

REPLY.—The quantity of grass seeds named above, we think entirely too large, one peck of white clover seed, and 1½ bushels of Red-top grass seed, would be sufficient to form a carpet of "*velvet.*" Our opinion is, that the *English Sward* grass is better adapted to lawns than Red-top, the latter grass delighting more in moist than dry soils. But independent of the habitudes of the grass, the *quantity* of seed, as recommended, would be a waste of means, as at least two-fifths of the plants would, necessarily, have to die out. We are the advocate of liberal seeding, but are opposed to all superflous applications.

For the American Farmer.

ON CHEMICAL ANALYSIS.

By Dr. James Higgins, State Agricultural Chemist.

In the last number of the American Farmer, I enunciated the proposition: that Chemical Analysis afforded the only certain and cheap method of improving poor "worn-out lands." Without entering at this time into any statement of the composition of soils, or of the uses of their several ingredients, I will only assume that which is apparent to the minds of all, and which none will or can dispute, *that crops are produced by certain constituents of the atmosphere which surrounds them and of the soil upon which they grow.* We cannot change or modify the constituents of the atmosphere; so far then as its influence extends all vegetation is alike affected by it. But the soil is under our control, and we can change and modify it at our pleasure; and upon it we must expend our labor and skill if we wish to influence its productions.

Crops *are but the effect of causes existing in the atmosphere and the soil;* one class of causes, those existing in the air cannot be changed, neither can the effects which this class of causes produce be changed; the other class, those in the soil, can be modified at pleasure, and the *effects* of these causes—crops, will always correspond to this modification. To alter, change, modify the nature of the soil has ever been the constant aim of the practice of agriculture from the earliest ages. With this view, land intended for cultivation, has been subjected to various mechanical preparations, and various substances. Manures have been added as *causes* to change and increase the crops, which are but the *effects* of the causes existing in the soil thus changed and modified. *Like causes will always produce like effects,* is an axiom as true as it is universal, and when we wish to produce any effect, all that we have to do is to understand, to know the causes upon which it depends, and by which it is produced; apply that cause and we are certain of the effect. So in agriculture—let us but know the composition of the soil, the only thing we can influence, which has produced a large crop, and we then know the causes which have produced that crop. Having then a soil which does not produce well, by ascertaining its composition, we can by comparing it with one which is fertile, see what causes exist in the one that have no existence in the other, we can apply those causes, by artificial means, and are certain when we have made the causes—that is, the composition of the soils, equal, that the effects—that is, the crops—will likewise be equal.

Without at all considering what particular substances give fertility to soils, or what part each particular constituent plays, it is enough for all practical purposes to know that soils of a certain composition produce large crops—and when we find a soil producing large crops and ascertain that it is composed of certain ingredients in particular proportions, we necessarily conclude that the crop which it bears, is the effect of this combination of ingredients in the soil, when we find this soil, this combination of causes, always producing the same effect—large crops whether in Germany, in England, or the United States, we are irresistibly led to the conclusion, that one is the effect of the other, and must be persuaded that in order to obtain the effect we must apply the cause which produces it.

If then we have a barren soil, ascertain its composition, see what it has in common with a fertile soil, find out what in it is absent which is present in that which is fertile, supply the deficiency, and reason, experience and common sense equally demonstrate, that it will be equally productive with the fertile soil; for the *causes being equal, the effect must be so likewise.* Suppose for instance that of the two soils, one has two hundred bushels of lime to the acre, and the other but twenty, yet alike in every other respect—the one being fertile, the other barren, as it necessarily would be—we by applying one hundred and eighty bushels to the barren one, would make both soils alike, and of course equally productive—and so with any other ingredient. But how could this deficiency in the barren soil be ascertained? What means have we of knowing its constituents? Who can find out its wants? Surely only by Chemical Analysis. By knowing the composition of fertile soils we can always make barren soils equal to them by supplying their deficiencies—by knowing the productiveness of a fertile soil, we can know before making improvements on a poor soil whether or not its increased production will pay for the cost of its improvement, as we can know before hand what production will take place before making the improvement, because we know that a soil of the precise constituents as the barren one will be after improvement has produced a given crop. If the soil was only composed of a single substance, or depended for fertility on some one particular ingredient—if crops only needed *one* substance for support, then when we found a barren soil, all that would be necessary would be to supply this substance; then fertile soils and productive crops would always be the result—But all soils are of a complex nature—composed of many different substances, and their fertility is in direct ratio with the quantity and proportion of these substances, and being destitute of only one ingredient, all others being present, may be barren. How can we ascertain the absence of this necessary ingredient? and without knowing what is absent, how do we know what to apply? Is it proof that because one poor soil has been benefitted by a particular substance, that another equally poor will be benefitted by the application of the same? Every man's experience answers in the negative. Soils differ in their composition, or the same manure would act equally well on all. The great *variety* of manures is indeed a practical acknowledgment of this difference. How can it be ascertained? How can we know that one soil is deficient in Lime, another in Magnesia, a third in the Phosphates, a fourth in the Sulphates, &c.? And unless we do know, what guaranty is there that we may not be applying to a soil what it has already in sufficient abundance, and withholding from it what it really needs? In applying manures composed of many different ingredients to poor land, some of those may be wanting, and of course, the land will be improved: a great part may be useless, and the cost of that part is money expended in vain. Without the aid of Chemical Analysis, no one ever has, ever can, or perhaps ever will discover the composition of a soil—without its aid, then, agriculturists will always be groping in darkness and uncertainty—with it, their operations being directed by certain and fixed rules, will always bring remunerating products for money expended and labor bestowed.

The practice of every art is more or less perfect as it has more or less aid from science, and we should in nothing spurn its offerings. Agriculture as a mere art can never reach beyond a certain degree of perfection. The great variety of soils, their complexity, and their individual differences can never be

understood without the application of the principles of chemical science; that agriculture is capable of being a science as well as an art none will doubt, and we must give it its privileges from a knowledge of *all* of the causes which influence the production of those substances which it seeks to develop. This knowledge can only be attained by *rigid Chemical Analysis* on the one hand—by *sound practical observation* on the other. Attentive study with chemical knowledge has drawn the lightning harmless from the skies—the same can make the earth yield abundance for the support of all of its creatures. Let not then its teachings be despised—let not its aid be undervalued—much, very much remains to be done, before it can make agriculture a perfect science, but because little has been done, so much the more does the necessity exist for greater exertion. Let facts be accumulated with all the circumstances annexed, which ever influence them, and principles will follow certain in their application, because based on the immutability of truth.

I had hoped to have been able to give a practical illustration of the above from the analyses of the two varieties of Col. Capron's unimproved land. I have not received any statement of the money value of the different manures used by this gentleman, and cannot therefore give the precise loss sustained from his inability to discover the constituents of the soil which he improved. The principles, however, can be demonstrated as well without the figures as with them. The specimens of soil were selected by Col. C. according to directions which I gave, and were marked No. 10 improved—No. 10 unimproved—No. 12 improved—No. 12 unimproved. We have at present only to deal with the unimproved varieties, Nos. 10 and 12. No. 10 unimproved differed from No. 12 unimproved, in containing but a trace of potash and none of the phosphates—the former supplied by ashes, the latter by bone-dust and guano. No. 12 contained sixty bushels of potash, and nearly fifteen bushels of phosphoric acid to the acre. It is plain to the meanest mind then that the application of the same materials to both of these varieties could not have been equally correct,—to make them equally productive, he should have added 60 bushels more of potash and about thirty bushels more of bone-dust to No. 10 than to No. 12. But No. 12 already contained enough of potash and the phosphates, (I say enough because I have found by my own analyses, and also by those made by others, that soils having this amount, and even less of these two substances are *very productive*) all the cost then of the ashes and bone-dust on No. 12 was useless. I say nothing of the guano, because its phosphates may be a set off to other ingredients contained in the ashes besides potash. If any number of bushels of potash and bone-dust were wanting on No. 12, then No. 10 required sixty bushels more of the former, and about thirty bushels more of the latter than No. 12. Again if No. 10 from the application of any given number of bushels of potash and matter containing the phosphates, had enough, then the quantity of sixty bushels of the former, and nearly thirty of the latter, should have been withheld from No. 12—as by these two quantities it already naturally exceeded No. 10. If the quantity of potash and bone-dust applied to No. 10 was enough, as for present crops it doubtless was, and being less than what existed naturally in No. 12, it (No. 12) certainly required none, for it already had more than No. 10 received, consequently all of the costs of the application of these two articles could have been saved. I do not know the exact number of acres of these different soils improved by Col. Capron; had I this information (which I sought,) with the cost of the several articles applied, the exact number of dollars expended in vain could easily be known.

JAMES HIGGINS,
State Agricultural Chemist.

LIME AND CLOVER.—It is plain to our mind, that all arable lands which may have been long in culture without having been limed, should be treated to a dose of this mineral, and it matters but little whether the dose given be in the form of *stone-lime*, *oyster-shell lime*, or *marl*, for after all the fine drawn theories which may have been written upon the subject, it is the calcareous principle which is found in either of those substances, which imparts value to either. Lands which are in cultivation lose, annually, through each succeeding crop, sensible portions of the lime which they originally contained, and hence the necessity for restoring, by artificial applications, that which may have been abstracted through the agency of corn, wheat, rye, grass and other products. But as lime is only one of the elements of which fertile soils are comprised; as it takes many to form such soils, and inasmuch as few farms furnish the materials to make manure enough to dress the plough crop of each season, it is indispensable that every cultivator should make his arrangements, to keep from a fourth to a fifth part of his farm in *clover*, in order that he may have a clover-ley to turn down at the commencement of each rotation, to make up for his deficiency in yard manure. The presence of lime in a soil is absolutely necessary to its successful cultivation, but however necessary lime may be, it can only perform certain offices, while even the performance of these offices are dependent upon the presence, also, of other bodies in the soil, as vegetable and animal manures; for its chemical manipulations can only be performed when such substances are brought into contact with it. He who expects to fertilize his soil with lime *alone*, will be disappointed, but he who judiciously uses it as an auxiliary to other substances positively nutritive, will have the gratification of realizing his most sanguine expectations.

GRAZING WHEAT.—An esteemed friend in Virginia, asks our views with respect to the propriety of grazing wheat fields. Upon this subject our opinion has been long made up—it is this—that where the farmer may find his wheat *rank* in the spring, he cannot do better than to turn his sheep in upon it, *whenever the earth is sufficiently firm to resist poaching*. Grown *Cattle*, however, we think would prove injurious, though calves might very properly be turned in with the sheep.

MT. AIRY INSTITUTE.—On another page will be found the report of the Committee of Examiners, of this Institute, which we commend to the perusal of our readers. We are gratified to learn that the prospects of this Institute are very flattering.

MOUNT AIRY AGRICULTURAL INSTITUTE.

Examination Report of Committee of Examination of the Mount Airy Agricultural Institute, held at the Institute, on Monday and Tuesday, the 26th and 27th February.

We, the undersigned, in compliance with an invitation from Mr. Wilkinson, Principal of the Institute, to attend the Semi-Annual Examination of his Class, have witnessed what has been to us a most gratifying and interesting performance.

The Examination was conducted according to the following order of exercises:

ORDER OF EXERCISES FOR MONDAY:

Mathematics.

Geometry, 1st Book,	Mr. Wilson.
do 3d do	Tillinghast, Smith and Baltzell.
do 7th and 8th do	Howard and Jackson.
Algebra,	Smith, Tillinghast and Baltzell.
Trigonometry, 5 Theorems,	by Jackson & Howard.

Surveying, Rules for Mensuration, description of Instruments, and mode of taking Surveys—Calculation—Theory of Calculation—Baltzell, Tillinghast, Howard, Jackson, Smith, Johnson and Kellogg.

Geology.

Classification of Rocks, (Lecture) by	Mr. Johnson.
Plutonic, Volcanic and Metaphoric,	Baltzell.
The New York System,	Cook.
Secondary Rocks,	Jackson.
Tertiary, Drift, Quarternary and Alluvium,	Smith.

EXERCISES FOR TUESDAY:

Chemistry.

Heat and Effects, (Lecture) by	Howard.
Oxygen and Chlorine,	Baltzell.
Iodine, Bromine, Fleurine and Sulphur,	Smith.
Nitrogen and Carbon,	Wilson.
Hydrogen & Compounds with Oxygen & Chlorine	Kellogg.
Hydrogen and Compounds with Carbon, Nitrogen and Phosphorus,	Tillinghast
Potassium, Sodium and Calcium,	Jackson.

Agricultural Chemistry.

Catechism on practical agriculture, in which the entire class were exercised.

Organic Elements and their Sources, (Lecture) by Howard.

Structure of the Stem & Root & their Functions Jackson.

Compositions of Woody Fibre, Gum, Starch, Sugar and their Transformation; also of Gluten, Albumen, and the action of Diastase, Tillinghast.

Soils, their Origin, Composition, Modes of Improvement, etc. Cook.

The students (as Mr. W. informed us) are from most of the Atlantic States, and one from Brazil, S. A., who designs on his return, founding an Agricultural College. They are truly a very promising class, and such as would do credit to any college or institution of learning of our country.

The Lectures on the various sciences were of a highly instructive and interesting character; were ably prepared, well delivered and well illustrated by experiments and specimens, particularly on Geology and Agricultural Chemistry. We were informed that in the course of instruction here pursued, the students are required to lecture upon every scientific subject they pursue, which was very evident from the manner, matter and style of their lectures at the Examination.

The catechetical exercises on *practical agriculture* were very interesting—by the promptness and accuracy of their answers it was evident that they were not only familiar with the agriculture of their own country but also with that of others.

The practical character of the course of instruction given at this institution cannot fail to qualify its graduates for success in their agricultural profession; and we are unanimously of the opinion that there are few schools in our country, where young men, designed for any vocation or profession, can enjoy greater facilities for acquiring a thorough practical business education than is here afforded. We confidently recommend parents (particularly of cities) who have sons to educate, to visit this institution, and acquaint themselves with its modus operandi, and we doubt not they will avail themselves of its advantages by giving it that patronage it so justly merits. We concur in the opinion that institutions of this character are much needed in various parts of our country, and that once their value and importance in properly educating our young men, is generally known, they will stand first upon the list of seminaries; and that the daily alternating of field labor and study in the scholastic course, is not only commendable, but that it is a desideratum.

In submitting the above report we frankly acknowledge that in our opinion, Mr. Wilkinson, the principal of this Institution, and his associate tutors, are fully competent to carry out the very laudable enterprise in which they are engaged, as pioneers in this country; in which we wish them the fullest success.

JAMES SMITH,
GEORGE BLIGHT,
SAMUEL MORRIS,
WM. H. SELLERS,
} Committee of Examination.

CAUTION.—The *surprising fertilizing* effects produced by the *Agricultural Salts*, manufactured and sold by the undersigned, may induce some unprincipled person or persons to attempt to deceive, by manufacturing a *spurious article*, and representing it as the same, or equal to ours as a fertilizer of the soil. Having already had intimations that such is the case, this *caution* is deemed necessary to put farmers and others on their guard; as no article can be efficacious, unless it contains *all*, and the same materials, and combined in proper proportions; such a preparation without our consent, will be an infringement of our patent; and dealt with accordingly; *any other* is a base *imposition, and should be rejected*. In sending orders to the city for the purchase of our article, be particular to have none but "*Chappell's Fertilizer.*" The name is stenciled on every barrel.

P. S. CHAPPELL,
WM. H. CHAPPELL,
} *Patentees*,
Corner of Hanover and Lombard Streets.
Baltimore, April 1st, 1849. apl.

☞*A good supply of the* "FERTILIZER" *now on hand,—Orders promptly executed.*

RAM LAMBS.—For sale, several Ram Lambs, got by one of the finest of Mr. Reybold's New Oxfordshire Rams, from choice Ewes of a cross of the South Down and Bakewell breeds. These are very fine animals, and can be highly recommended to those who wish to improve their flocks. Price, delivered in Baltimore, at $10—they are of this spring's yeaning, and will be delivered in August or September. Address the publisher of this paper. apl-3t

LEVEL.—A very cheap Level, for Ditching and Draining, can be examined at the Agricultural Society's Rooms.—An instrument of this kind is highly recommended by Mr. Stabler, in his prize essay; and it is believed that the one now presented will be found as efficient, for all the purposes of the farmer, as those which usually cost $100 and upwards. This level can be sold at $3.50. Orders for it received at this Office. Apl

A HOLSTEIN COW FOR SALE.—A fine large white and black cow, of a most excellent milking stock, whose calves have sold at very high prices, is for sale. She is now near 8 years old, in calf. Price $35.

Also a full bred, very handsome Berkshire Sow, has had her first litter—is about a year old. Price $15. She is now in pig.

Also, several young Boars, out of an African or Guinea Sow, by a Boar of the cross of Berkshire and Chester breed. Price $5 each. Apply to the publisher of this paper. ap 1-1t

A FARM, ON SHARES, IS WANTED, by a Farmer who is fully qualified to conduct a market farm, near the city; or would be willing to take a situation as Manager. His wife is capable of superintending the Dairy. Address H., (if by mail, post paid) care of the Editor of the American Farmer. Best of reference can be given. A1-1t

FLOWER SEEDS.—Just received a supply of FLOWER SEEDS, of every variety, which will be sold wholesale and Retail, by SAMUEL SANDS,
m1 At the Agricultural Society's Rooms, Baltimore-street.

"A KENT FARMER" was received too late for this No.

A BEAUTIFUL PRESENT.—At a recent meeting of the Board of Managers of the "Maryland Institute for the Promotion of the Mechanic Arts," it was resolved, that a committee be appointed to prepare a suitable testimonial to Mr. SAMUEL SANDS, the Secretary of the Institute, for his services during the past year. The committee in accordance with their appointment, engaged the services of Messrs. A. E. Warner & Son, in the manufacture of a Silver Pitcher, which, at the regular monthly meeting of the Institute, in March, was formally presented by *Joshua Vansant*, Esq., President, to the Secretary, in a very eloquent and complimentary address, to which Mr. Sands made a suitable response.

The workmanship on this beautiful Pitcher, has, perhaps, never been excelled by any artizan of our city. The artist has happily blended with the arms of the State, various agricultural and mechanical implements, thus very appropriately designating the connecting link of Mr. S. between the Agricultural and Mechanical interests of our Maryland.

Review of the Tobacco and Grain Markets, reported for the "American Farmer," by J. W. & E. Reynolds, Farmers and Planters' Agents, April 1st, 1849.

We have no new feature to notice in either the tobacco or grain markets since our last report—*Corn* has fallen some 2 to 3 cents, though without any *real* cause, but other grain remains about the same. As it regards the probable prices of grain, we have nothing to say; it is always a very unsteady and changeable market, so much so indeed, that it would appear as if it was operated upon directly contrary to all the laws which usually govern trade in other things; in fact we see no reason at this time, why grain should in all probability be any higher, and certainly no lower.

Tobacco, except for the small quantity of the new crop now beginning to arrive, has not been of brisk sale, which is to be attributed mainly to the inferiority of the old stock now on hand, which is in fact the refuse of three very *dull* crops, viz: 1845, '46 and '47. We have no trouble, however, in selling any of the new crop, as so far it is the best in quality which we have received for seven years, and should nothing occur in Europe to prevent it, we anticipate fairer prices this year than we have had since 1845; but we are afraid of "Schleswig-Holstein," as our troubles came from this quarter last year—we would not anticipate any great evil from this point even now, however, did we not know that there is something "rotten in the state of Denmark," so much so in a political point of view at least, that she will not agree to give up "Schleswig-Holstein" without a hard struggle, (they had several engagements last year,) which might involve other parts of Europe, and cause such a commercial trouble as we had last year. In fact, if such should be the case again, we will only have the consolation of knowing that it is one of the results of the "Holy alliance" which gave poor "Schleswig" to Denmark, when in fact it ought to have been what it is now striving to be, a free "German State."

We quote common dark crop and second tobacco, at $2 to $3; good crop 3½ to 4½; good and fine reds 5 to 8½. White corn 43 to 44, yellow do 48 to 50. Wheat, prime red 105—common red 95 to $1. Oats 26c to 28c. Rye 55c. to 56c.

Prices of Guano, &c.

Guano, Peruvian, $45 per ton of 2000 lbs.—Patagonian, $35—Chilian, $30.

Beef Cattle.—The offerings at the scales on the 26th were 700 head, of which 300 were sent to Philadelphia, and the balance sold at 2½ to 4½, principally at $4, averaging $3.75 gross—*Hogs*, $5.50a$6 for live, supply fair—The *Flour* market is unsettled by the late news per the steamer Caladonia; last sales of Howard-st. at $4.62—no sales of City Mills—*Whiskey*, 23½c. in bbls. and 22½ in hhds.

METEOROLOGICAL TABLE,

From the 19th of February to the 21st of March.

Kept at Schellman Hall, near Sykesville, Carroll County, Md.

Taken at 6 o'clock, a. m., 2 o'clock, noon, and at 6 o'clock.

	Wind.			Temperature			Remarks.
20	SE	SE	S	13	32	27	Cloudy Snow
21	E	SE	SE	26	33	30	Cloudy
22	SE	SE	SE	27	30	28	Snow 3 inches
23	N	S	S	27	40	34	Cloudy
24	NW	SE	SE	18	43	39	Clear rain 1 inch
25	NW	W	W	33	43	38	Fog Clear
26	NW	NW	NE	33	39	35	Snow
27	NE	NE	NE	33	34	34	Cloudy rain 1 inch
28	SE	NE	W	30	36	35	Cloudy
1	S	SW	S	33	49	44	Fog Clear
2	NE	E	E	36	34	32	Cloudy, rain, hail, snow, rain
3	SE	E	NW	28	35	30	Snow 1 in., clondy
4	N	NE	NE	22	35	31	Clear
5	SE	SE	SE	26	33	30	Cloudy, snow, cloudy
6	SE	NE	SE	30	34	36	Sleet, rain
7	SE	W	W	37	51	46	Fog, cloudy, clear
8	NW	NW	NW	31	45	40	Clear
9	W	W	W	32	45	39	Cloudy
10	W	W	SW	29	51	45	Clear
11	W	W	W	31	56	49	do
12	W	SW	S	35	50	50	Cloudy Clear
13	SW	S	S	36	59	57	Clear
14	NE	NE	NE	39	40	37	Rain
15	NE	NE	SW	33	37	39	Fine rain Cloudy
16	S	S	S	39	57	53	Gust, cloudy, clear
17	S	S	W	38	64	57	Fog, cloudy, gust
18	NW	NW	NW	45	51	44	Cloudy Clear
19	NW	W	W	30	60	46	Clear
20	S	S	S	35	54	50	Clear Rain.

WANTED—By a gentleman who is about leaving the State for some time, a FARMER who is well qualified to take charge of a large Farm, about 20 miles from the City of Baltimore. As the whole charge of the estate, and the superintendence of a number of hands, will devolve upon the manager, it is necessary that the most undoubted reference as to qualifications and character will be furnished, *and none other need apply.* The very highest salary will be given, and the most comfortable accommodations. It is necessary for the applicant to be well conversant with the most improved modes of culture, and the management and care of fine stock. Apply to the Editor of the American Farmer. Apl

FOR SALE.—Two pair CHESTER PIGS, very superior animals—will be ready to deliver 1st May. Price $15 per pair. These animals can be well recommended.

Also—4 Boars of the same breed and litters. Apply at this Office to S. SANDS. ap 1-1t.

GUANO.

1000 TONS BEST PERUVIAN GUANO, just received from the Chinche Islands.

Also, *PATAGONIAN AND AFRICAN GUANO*, in large or small quantities to suit purchasers.

We recommend to the farmers and planters to form associations for the purchase of guano in larger quantities than they can do singly. Their interest is concerned in buying directly from the port where it is imported, in large quantities, and from such dealers as they can rely upon.

A. B. ALLEN & CO.,
Jan1 4t 189 and 191 Water street, New York.

PURE BONE-DUST MANURE.

THIS article is recommended to the attention of Farmers, Gardeners and Planters, as one of the most valuable manures known. *The fine Powdered Manure* now offered, has the following advantages to recommend it:

1st, It is guaranteed to be entirely *pure bone*, without a particle of any foreign substance; clean, dry, and free from smell; so that it can be conveyed by rail-way or vessel, and may be kept in store without any inconvenience.

2d, Being *ground fine*, from fresh bones, cleaned and dried before grinding, and packed in good clean barrels, it has never undergone decomposition, and will remain perfectly sweet as long as it is kept dry. Many persons believe that bone manure to be good must be offensive;—this is an error: the smell arising from decaying bones is nothing more than the volatile gasses given off by the decomposing bone, and therefore, persons who prefer purchasing offensive bone manure, get an article which has lost or is losing much of the valuable properties of the bone. The object of *this fine ground* Manure is to retain these qualities *in the bone* until they are placed in the soil, so as to give all that is valuable to the crop. This can only be done by thoroughly cleaning and drying fresh bones, and keeping them dry. Such is *this fine bone dust* Manure now offered.

3d, Bone to be valuable as a Manure, must decompose in the soil. By grinding it fine, it will readily decompose. Large pieces of bone, every farmer knows, often remain for years in the ground without being affected, and so long as they remain, they are a loss of time and money.

4th, *This fine powdered bone* can be put on with but little labor, and one-third of a bushel will be as effective as a bushel of large sized bone.

5th, According to Liebig and other good authorities, the effects of bone as a Manure, extend to the seventh crop. The beneficial effect of *this powdered* bone is had the very first season it is applied, and will continue to impart its virtues up to the seventh. The economy in the use of *fine bone* is apparent.

6, This *fine powdered bone* is offered as low per pound as coarse cracked bones. A bushel of bones cracked by the ordinary mills, weighs about 35 lbs., and sells at 35 cents per bushel; a bushel of this *fine powdered bone* weighs about 50 lbs., and is offered at wholesale at *one cent per pound*; a barrel weighs a little over 200 lbs.; no charge made for the barrel, which is so far a gain to the buyer.

7th, Bones appear to furnish the most natural nutriment to the Vegetable Kingdom; for besides the various gasses which they impart, they afford the chief source of the supply of *Phosphate of lime*, which gives strength to the woody fibre or skeleton of the plant. This is the most valuable portion of any manure. Guano yields Phosphate of Lime, but not in as great amount as bone; and in this respect, bone, if *well ground*, is superior to that expensive Manure.

Farmers, Market-Gardeners, &c., will find this powdered bone to be the most convenient and cheap Manure, for every description of Grain, Corn, Vegetables, Fruit Trees, Grape Vines, Grasses, &c. Orders promptly supplied by

HAYDEN & COALE,
No. 63 S. Gay-street, Baltimore.

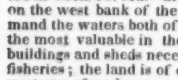
March, 1849. ap. 1-1t.

VALUABLE LAND FOR SALE.

THE undersigned offers for sale, in one body, or in portions, or for Lease to tenants well recommended, the well known CARPENTER'S POINT FARM and Fisheries, situated in Cecil Co. Md.—at the head of the Chesapeake Bay, and on the west bank of the North East River. The shores command the waters both of the bay and the river, and are among the most valuable in the State; they include a number of buildings and sheds necessary for the active prosecution of the fisheries; the land is of easy cultivation, and enjoys the advantages of ready access by water communication, to the markets of Havre de Grace and Baltimore. The entire tract contains about 650 acres, of which some 125 are under actual cultivation, as many more lying out as common, whilst of the remainder one half has been recently cleared and the other is very heavily timbered.

For further information, or for wood-cut map showing the position and shape of the property, and the prominent places in its vicinity, application may be made to George Earle, Elkton, Md.—J. F. Houston, Columbia, Pa.—J. S. Skinner & Son, Phila.—the office of this paper, or to

ml J. HOWARD McHENRY, Baltimore.



A. G. MOTT,
MANUFACTURER OF
PLOWS, HARROWS, CULTIVATORS, GRAIN CRADLES, WHEAT FANS, CORN SHELLERS, CYLINDRICAL STRAW CUTTERS, &c. &c.

☞ Plow Castings, of the New York composition chilled metal, always on hand, and old implements repaired, at No. 8 ENSOR STREET, adjoining the Bel-air Market, Baltimore.

Jan1

A BOOK FOR EVERYBODY!

COLE'S
AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Editor of the New England Farmer, and author of the popular work entitled The American Veterinarian, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

COLE'S AMERICAN FRUIT BOOK,

A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons:

FIRST, It is a mature work and a practical one, one on which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and ultra scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically a book for

THE PEOPLE.

SECONDLY, It will have an unprecedented sale on account of its *cheapness*. It makes a volume of 288 closely printed pages. Illustrated with over one hundred beautifully executed engravings, by Brown, and will be sold for 50 cents, firmly bound in Leather, and 62½ cents in Fancy Cloth, with gilt backs. It will contain full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and outlines of FRUIT TREES, and various other designs. Emphatically a

Book for Everybody.

As well for the man who eats Fruit, as for him who raises it.

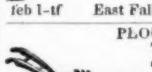
This valuable work is just from the press and is now for sale at our counter, and will be offered for sale by our regular Agents throughout the country.

John P. Jewett, Publisher.

ap1-2t 23 CORNHILL, BOSTON.

FOR SALE.—100 bushels of BONE SHAVINGS—by
R. BALL,
feb 1-tf East Falls Avenue, near the Bridge, Baltimore.

PLOUGHS! PLOUGHS!!



The subscriber is manufacturing Ploughs of various patterns and of different sizes; also Wheat Fans, Cylindrical Straw Cutters, Corn and Tobacco Cultivators, CORN SHELLERS, &c. Also, THRESHING MACHINES and HORSE POWERS—these latter are used by the following gentlemen, to whom reference is made, as to their superior value, viz: Messrs. T. Beard, Th. Beard, Dr. Watkins, J. T. Hodges, T. Welsh, W. Mackall, J. Inglehart, A. Sellman, R. Sellman, W. Hopkins, J. Kent, Geo. Wells, Geo. Gale, Dr. Fenwick, A. Franklin, J. C. Weems, of Anne Arundel county; G. W. Weems, J. T. Barber, R. B. Chew, W. Boswell, Y. Howes, of Calvert co., Md. Agent of Evans Davis, Baltimore co. for sale of the woodcock Plow. Pennsylvania Grain Cradles. CHAS. H. DRURY.

Gillingham Alley, entrance from Howard-st., near Pratt,
mal and store, Hollingsworth-st. corner Pratt.

LIME—LIME—The subscriber is prepared to furnish from his depot at the City Block, Baltimore, ALUM STONE LIME of the purest description, deliverable at any point on the Chesapeake Bay or its tributaries, at such prices as cannot fail to please.

He is also prepared to furnish superior building Lime at 25c. per bushel, in hhds., or at $1 per bbl.

E. J. COOPER,
july 1 City Block, Baltimore.

E. WHITMAN,

Will offer for sale this season, the largest Stock of

Agricultural Implements and Seeds,

Ever found in an Agricultural Warehouse in the City of Baltimore; consisting in part of

100 Whitman's Premium Wrought Iron Rail-way Horse-powers. Price of the Double Power, $100, single dito $75.

100 Various kinds of Sweep Horse-powers, viz: Fitz', Allen's, Kirkpatrick's and others, from $65 to $120.

200 Whitman's Improved Threshers The cylinder of this machine will last 100 years, in constant use. Price, $45 to $50. If the Straw Carrier is attached, $15 will be added; and if made to thresh and clean at one operation, price $100.

50 Common Threshers, as low as can be purchased in any part of the country.

6,000 PLOUGHS,

Consisting of every kind sold in Maryland, New York, and Massachusetts. The first Premium on Ploughs in the Ploughing Match of the State Fair, holden at Baltimore, last November, was looked upon as a matter of great importance to every one engaged in agriculture; and this made the contest a spirited one, and brought in ploughs from all parts of the country, among which was the *Wiley*, Moore & Chamberlain, "Maryland Self-sharpener," and a host of others. The Committee, *after ttial*, had no hesitation in awarding the *first* premium to E. Whitman, Jr., for the work done with his Prouty & Mears' Centre-draft Plough.

300 Cultivators, which also received the first premium at the State Fair and at various other Fairs. Price, $4 to $6.

50 Corn and Cob Crushers, which received the first Premium at the State Fair, and also at the Fair of the Maryland Institute, and at various other Fairs. Price, $50.

200 *Wheat Fans*, of various kinds and patterns, among which is I. T. Grant's, which is now used in this country and in Europe with great success; and we consider it the best *Fan* in use. Price, from $25 to $40.

500 *Whitman's Premium Corn Shellers*. Price, $10, $16, $30.

200 *Straw Cutters*, from $7 to $45.

500 Premium Churns, from $2.50 to $7.

50 Corn Planters. One boy and horse with this drill will plant 10 acres per day. Price, $20.

50 *Cider Mills*. These mills grind the apple to a pulp, and are warranted to produce more cider, and of better quality, than any other mill. Price $20 and $25.

A large stock of Wheat Drills, Hay Presses, Gold Washers, and all kinds of Plough Castings, Grain Cradles, Shovels, Hoes, Spades, &c. &c. E. WHITMAN, Jr.,
Corner of Light and Pratt streets,
marl Baltimore, Md.

PLOUGHS! PLOUGHS!!

AMONG the Ploughs at Whitman's will be found the Prouty & Mears; Ruggles, Nourse & Mason's; Minor & Horton; Moore & Chamberlain; Wiley; Woodcock; Davis & Chenoweth, of all sizes; and various other kinds of Ploughs in use in Maryland.

The Premium Hay and Manure Forks, Thermometer Churns, Saussage Stuffers, and various other premium articles too numerous to particularize, are also found at Whitman's, Corner of Light & Pratt-sts., Baltimore. dec 1

HAYLAND FOR SALE.

IN consequence of my continued ill health, I offer for sale, my valuable farm, formerly the estate of D. Stuart, esq., who lavished many thousand dollars upon it, enriching the soil, &c. with large quantities of lime, manure, &c.; it is located 5 miles from Baltimore, between the Harford and Bel-air roads, the latter being free from toll gates.

The improvements are far superior to those generally erected on farms. The fruit is of choice kinds, the water very good, and the location high and remarkably healthy.

The road from its entrance has been well gravelled and several hundred feet paved neatly in the best manner with stone, affording in damp weather a pleasant walk of one-fourth of a mile, also a handsome avenue or paved street 54 feet wide and extending beyond the barns, (a great advantage in muddy weather), on one side of which is a large stone barn, cow, hog, smoke and steam houses 180 feet in length. On the opposite side are a beautiful brick dairy, a large rough-cast 3 story stone dwelling, a handsome stone granary and carriage house, stable, poultry and wagon houses.

The main dwelling (a neat cottage with porticos), the ice and manager's houses are located at convenient distances from the above, and all of which at a large cost have been erected within a few years past.

There are 200 acres of land (100 in wood and paving stone, both quite valuable so near the city). The soil is a fine light loam, excepting the meadows, (now in timothy,) which are white oak bottom. The land is in a high state of cultivation, the whole having been recently re-limed and improved by bone-dust, ashes, &c. If used as a garden and dairy farm it would be very lucrative. It will be sold in one lot or divided into lots for country seats, &c. The terms will be very liberal—approved city property or stocks will answer.

JOHN H. KEENE,
February 23d, 1849. mh.1 Hayland, near Balto.

CHEMICAL MANURE,

Manufactured by the "George Bommer New York Manure Company."

THIS Manure is made chiefly of Fecal matter from the sinks, in which is mixed a small portion of substances that are of themselves powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly in proportion to the requirements of the plants, and therefore, produce its effects for a time equal to that of farm manure.—This process was at length discovered by the French Chemists, and is now practically carried out with complete success in more than sixty of the large cities in France, where such factories are in full operation.

The "G. B. N. Y. M. Co." has established a Factory, on an extensive scale, near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal troublesome and laborious.

The manufacturing department is under the special charge of George Bommer, esq., who has a perfect scientific and practical knowledge of manure matters generally, and the company has established a standard for the strength of its manure from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it. Our manure is an inodorous grain, and as the substances from whichit is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels or 36 to 45 bushels spread broadcast. Applied in hills, one half of this quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany every parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another, known under the name of "Poudrette," although the principal component of ours (the Fecal matter) is the same as that which is used in poudrette in a much less proportion; our auxiliary substances, as well as our manufacturing process, are altogether of a different nature and kind.

It belongs not to us to eulogize further the quality of our manure, what we desire at present is, to call upon the members of the agricultural community to try it! and we have reasons to assure them, that they will find it the most profitable manure they ever used.

Price, taken at the Factory:

37½ cents per bushel, without package; 50 cents per bushel, packed in barrels; or, $1.50 per barrel, package included.

Orders addressed to the above company at this office, 72 Greenwich-st., New York, will be promptly attended to.

By order of the Board of Directors,
GEORGE BOMMER, Director.

New York, January, 1849.

☞The Factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards. Feb. 1–tf.

WHITE MERCER POTATOES—A NEW VARIETY.—These potatoes were originally grown by a gentleman in New Jersey from seed of the Mercer. It is a superior variety both for early and late planting. And so far has not suffered from the hollow heart, incident to the old variety. A sample may be seen at this office. Persons wishing to procure seed will leave their orders. Price $1.25 per bushel.
mh.1. S. SANDS.

LIME—LIME—The subscriber is prepared to furnish from his depot at the City Block, Baltimore, ALUM STONE LIME of the purest description, deliverable at any point on the Chesapeak Bay or its tributaries, at such prices as cannot fail to please.

He is also prepared to furnish superior building Lime at 25c. per bushel, in hhds., or at $1 per bbl. E. J. COOPER,
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OSAGE ORANGE SEED.—Persons wishing to obtain a supply of this Seed, can be furnished at this Office, at the reduced rate of $2 per quart. dec1

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Agricultural and Seed Warehouse,
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THE Proprietor of this establishment respectfull invites the attention of Maryland and Virginia agriculturists to his stock of Implements and Machinery, which is as extensive and varied as that of any similar house in the United States.

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Horse Powers, Threshing Machines, Ploughs, &c.
FOR SALE AT LESS THAN FIRST COST.

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CONTENTS OF THE APRIL NO.

Work on the Farm	313	Agricultural Convention of Delaware,	333
Salting Manure,	317		
G'l Chapman's Address	318-331	Mr. Carmichael, on the prevention of injury, by birds, insects, &c.	333
Patuxent Planter, on Kloss Wheat, &c.	324		
On the importance of associations	325	E. F. R. on the improvement in Talbot,	334
Dr. Dimmett on the Osage Orange,	326	Lime for Agriculture,	335
Mr. Bateham, on the same	327	Ashes and Bone,	336
Oats on Poor Land	327	G.A. Digges, on Orchards and Timothy,	336
Notices, to subscribers, correspondents, and reception of seeds,	328	R. S. H. on Charring Posts	337
		On the Use of Charcoal,	337
The Farmer's Exchange,	328	Effects of Plaster, Salt and Ashes,	337
Col. Capron's bull Valentine		Manuring a poor field for Corn,	338
Mr. Slingerland's Report,	329		
Protection to Agriculture,	330	Prof. Hallowell, on the destruction of Sassafras bushes,	338
The Home Department,	330		
On Chemical Analysis, by Dr. Higgins,	331 342	Chappell's Fertilizer,	338
		Floriculture for April,	339
Glossary, notice of a	331	Work in the Garden,	340
Drilling Wheat,	331	On Culture of Tomatoes,	341
Washington Co. Agr. Soc.	331	H. on sowing grass and clover seed,	341
Worton's Point, Kent Co.	331		
Agricultural Movements	331	Lime and Clover,	343
The Farmer in Virginia,	331-2	Grazing Wheat,	343
Bones for Buckwheat,	332	Mt. Airy Institute	343 344
Astonishing yield of Corn,	332	Handsome Present,	345
Renovattion in the District of Columbia,	332	Markets, Meteorological Table, &c.	345